FOOD INVESTIGATION

REPORT

OF THE

FEDERAL TRADE COMMISSION

ON

PRIVATE CAR LINES

Part I. General Survey of Private Car Lines
Part II. The Packer Car Lines and their Relations to the Public
Part III. Nonpacker Car Lines

JUNE 27, 1919

WASHINGTON
GOVERNMENT PRINTING OFFICE
1920

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In connection with this investigation and the preparation of the report, the Commission desires especially to mention Fred Bremier, examiner in charge, W. H. Reeves, and Elmer C. Wirtz.

LETTER OF TRANSMITTAL.

FEDERAL TRADE COMMISSION,
OFFICE OF THE CHAIRMAN,
Washington, 27 June, 1919.

SIR: I have the honor to submit herewith a Report of the Federal Trade Commission on Private Car Lines, being a part of the Commission's food investigation, undertaken at your direction.

This report covers particularly the refrigerator transportation of meats and other perishable foods.

By direction of the Commission.

Yours very truly,

WILLIAM B. COLVER,
Chairman.

The PRESIDENT,
The White House.

LETTER OF SUBMITTAL.

FEDERAL TRADE COMMISSION,
Washington, 27 June, 1919.

To the PRESIDENT OF THE UNITED STATES.

SIR: In accordance with your letter of February 7, 1917, directing an investigation into the facts relating to the production and distribution of foodstuffs, into alleged violations of the antitrust acts with respect thereto, and particularly into any manipulations, controls, etc., in the course of trade therein, the Commission submits herewith (in addition to reports previously made) a report on private car lines used in the transportation of live stock, meats, and other perishable foods.

The most important types of private cars considered are the brine tank refrigerator car equipped for the transportation of dressed meat carcasses, and the ventilator refrigerator car suitable for packing house products and for vegetables and fruits. The three principal classes of owners are the packers, the railroads, and private car com panies leasing their equipment to shippers and railroads.

The refrigerator car made practicable a more extensive and economical use of food products. For fruits and vegetables it encouraged the development of production in regions especially fitted therefor by soil, climate, and season of growth. In the meat industry it facilitated the concentration of slaughter by making practicable the long-distance shipment of fresh meat, in place of the shipment of live cattle to the localities of consumption. It has also tended to the curtailment of the local slaughter of meat animals.

The present country-wide system of distribution by the five larger packers through their branch houses and peddler car routes is built around the principle of refrigeration and has grown up, historically, from their control of refrigerator car lines in conjunction with the various pools and combinations maintained almost continuously for more than 30 years.

Extensive ownership of brine tank refrigerator cars by these larger packers is a principal factor in their control of the meat industry. On December 31, 1917, they owned 15,454 brine tank cars, adapted to the shipment of fresh beef and carcass meats, which is over 90 per cent of the total equipment of this type of car. Their ownership, until recently, of accessory facilities such as icing stations and platforms located advantageously in trunk line territory, strengthened their control over the meat industry.

In turn, the volume of traffic of these larger packers has enabled them to secure from the railroads advantages over competing shippers. Formerly in the shape of direct rebates, these advantages more recently have been usually in expedited service to the big-packer cars; in favorable mixing rules which include all their diversified

products and even many articles not related to the packing industry; by allowances paid to some of the big packers by carriers for the performance of a part of the transportation service; by favorable arrangements and lease of stockyards by the railroads to some of the big packers; and by other devices, such as, in the case of one of the five packers, the sale to railroads of bumping posts manufactured by an affiliated company.

On the other hand competitors of the big packers in meat and other food lines obtain no advantage from these concessions.

The small independent packer's cars are misused and diverted, frequently being out of his service for extended periods, in several instances as long as six months.

In 1917, cars of the Big Five packers and of their subsidiary companies maintained an average of 80.8 miles per car per day, while the average for the cars of their competitors, the independent packing companies, was only 54.5 miles.

The wholesale grocer suffers discrimination, in actual practice, in that the big packer can take advantage of the special mixing rules and peddler car rules to ship groceries in the same car with fresh meats and thereby secure for them, among other advantages, the same expedited and frequent transportation given to fresh meats, while the wholesale grocer's shipments must take the ordinary course. These discriminations amount to a special privilege and to that extent are contrary to the public interest.

The situation in the fruit and vegetable business differs from the packing industry in that in most cases cars are furnished, not by the shippers, but by the carriers or private car companies. The exclusive contract, by which a carrier agrees to use the cars of one company to the exclusion of all other equipment, has in some cases operated to the detriment of both producer and consumer. The stockholders of Armour & Co. own the Fruit Growers Express, Inc., with 5,660 ventilator refrigerator cars, which has exclusive contracts with seven railroads in the Southeast which carry a large part of the perishable products from this section. By virtue of these contracts it maintains a practical monopoly of the business of supplying cars to these railroads for transporting and refrigerating fruits and vegetables from important growing districts there. The Fruit Growers Express, Inc., has failed to maintain its refrigerator car equipment in satisfactory condition, with the result that shippers have frequently suffered unnecessary impairment of their products. Yet, because of the exclusive contract, cars could not be obtained from other sources. The carriers' obligation, under the interstate commerce act, to provide suitable refrigerator equipment, and the means of enforcing the same though the Interstate Commerce Commission, have not been so developed as to afford the shipper adequate relief. Nor has the United States Railroad Administration as yet had opportunity or funds to provide refrigerator cars of the new standard type that it has caused to be designed.

In connection with the operation of the special facilities necessary for icing refrigerator cars, both before shipment and during transit, many inequalities arose in service and rates which demanded correction. On July 31, 1918, the Interstate Commerce Commission decreed that the carrier should own and operate all icing stations and perform the service of refrigeration in transit.

The live-stock cars are at present chiefly owned by the railroads, and to no great extent by other companies, though Swift & Co. owns over 13 per cent of the supply of double-deck live-stock cars.

In this report extensive data are presented regarding the investment, operating expenses, and revenues, of various classes of private car lines, and also specific data regarding the cost of icing and the charges made for refrigeration where that is furnished by the railroad company. An important fact to be noted in this connection is that there has been generally a decline in the rate of profits on investment for private car lines in recent years compared with earlier periods. For refrigerator car lines, in recent years the rate of profit has been generally low, especially for the smaller companies. The explanation of this fact is found chiefly in an increase in operating expenses, while the revenues remained on a fixed basis until October, 1917, when the mileage rate which had theretofore been three-quarters of a cent a mile in the more important railroad territory, was made 1 cent a mile.

Undoubtedly, the effect of the low profits of recent years has been to discourage independent meat packers from attempting to operate private car lines; and in consequence to impede further the free flow, in commerce, of meat products.

Under the three-quarter cent mileage rate almost universally in effect up to October, 1917, the private car accounts of the big packers on their face showed in the aggregate comparatively small gains or losses in 1912, 1914, and 1917, including the Fruit Growers Express, Inc., in 1917. A revision, however, of the private car accounts, including the Fruit Growers Express, Inc., in 1917, shows an average profit on the investment of 6.8 per cent in 1912, 3.8 per cent in 1914, and 4.6 per cent in 1917.

The prompt and efficient handling of the traffic in meats and other perishable foods is of great public concern, and it is also important that all shippers should have equal and adequate service.

In order, therefore, to correct the present inequalities of service and rates as well as to prevent the dangers of monopolistic advantages in the use of certain types of cars, the following recommendations are made.

1. That the Government acquire all cars used for the transportation of meat animals and all necessary equipment for their proper operation and that such ownership and operation be declared a Government monopoly; or that such cars be owned and operated by the railroads under Government license regulation.

2. That the Government acquire all refrigerator cars and all necessary equipment for their proper operation and that such ownership and operation be declared a Government monopoly; or that such cars and equipment be owned and operated by the railroads under Government license regulation.

These recommendations contemplate the acquisition and operation not only of the live-stock cars and refrigerator cars, but also of all necessary facilities for their operation, such as car shops for their construction and repair, feeding and watering facilities for live stock in transit, precooling equipment for refrigerator cars and icing stations for the refrigeration of perishables in transit, ice manufacturing plants and natural ice producing privileges connected therewith or necessary thereto, together with such other facilities as may

be needed to secure the efficient transportation of meat animals and perishable food products.

The execution of these recommendations would give to the small packer, especially, facilities which he generally lacks at the present time and for which he is frequently not able to provide either because his requirements are not large enough to justify the investment or because he is not financially strong enough to procure the necessary equipment. Assurance of an equitable allotment of cars would make him a stronger competitor of the big companies.

In the fruit and vegetable trade, also, considerable advantage, both to producer and consumer, should follow this legislation.

Further, all this equipment should be under unified direction, in which event there would be opportunity for considerable economies in utilization and in expense of operation.

It is worth suggesting that, as an incident of the administration of refrigerator cars under this system, a single combined rate might be established to apply to each kind of transportation service, and thus do away with separate charges for freight, refrigeration, and icing. This would simplify not only rate and service accounting, but also the shipper's marketing, for he would know his charges before making shipment and would be able to quote delivered prices.

Respectfully,

William B. Colver,
Chairman.
John Franklin Fort.
Victor Murdock.
Huston Thompson

REPORT ON PRIVATE CAR LINES.

INTRODUCTION AND SUMMARY.

The scope of this report on the subject of private car lines is limited to an exposition of those private car companies and shippers which own cars used in the transportation of live meat animals and perishable food products. It therefore includes all private car companies and shippers owning live-stock cars and refrigerator cars. These companies, owing to the nature of their organization, are naturally classified into five groups:

1. The Big Five packers and their subsidiary and affiliated companies.
2. Other shippers who own cars, either directly or indirectly through separately incorporated car companies.
3. Independent private car companies which are organized for the purpose of leasing cars to railroads and shippers.
4. Private car companies whose stock is owned by railroad companies.
5. The Fruit Growers Express Inc.

The Fruit Growers Express Inc. is placed in a class by itself because it is the only company affiliated with a shipper which is not engaged primarily in the handling of that shipper's goods.

The report naturally divides itself into three parts: First, a general discussion of the principles and practices relative to all private car lines; second, a study of the results of operation of the cars of the Big Five packers and their subsidiary and affiliated companies; and third, the treatment of the subject of independent private car companies and railroad-owned companies.

The principal reason for the private ownership of refrigerator cars in the beginning was the fact that the railroads did not care to invest in that class of equipment while it was still in its experimental stage. The meat packers originally provided themselves with cars because the carriers were not disposed to furnish them. Likewise, the private car companies interested in developing the fruit and vegetable traffic invested in refrigerator cars because the railroads were not giving their attention to the development of that type of car. This reason for private ownership of refrigerators, although valid enough at first, can not now be advanced, for the refrigerator car is no longer an experiment but a necessity in modern transportation.

The refrigerator car has contributed greatly to the development and centralization of the packing industry and the fruit and vegetable business. With the aid of the refrigerator car, packing plants have grown from local businesses to great national enterprises. In the fruit and vegetable business specialized productive areas have been developed. The result in both industries has been to widen the area from which the supply of fresh products for the consumer may be drawn.

The cars used in the meat-packing business are principally refrigerator cars and stock cars. Of the former there are in general two classes—the beef refrigerator car and the ventilator refrigerator car. The railroads have provided themselves with a large number of this latter type of car, but they have never furnished any beef refrigerator cars. The carriers have never attempted to handle the fresh-meat traffic—they have always left it to the shipper to provide himself with this kind of equipment. The meat packer, therefore, meets a situation which is not general among shippers of other commodities. He must be able to raise capital sufficient not only to operate his plant but to provide his facilities of transportation as well. This can be done by the large packer without serious inconvenience, but the small packer often finds it impossible to provide such facilities.

The Big Five packers control practically the entire supply of beef refrigerator cars. They own more than 90 per cent of this class of equipment. The railroads own none of these cars and the independent private car companies own very few. Ownership of these cars gives to the Big Five packers a practical assurance of always being able to ship their fresh-meat product, while the inadequate supply of such equipment available to the small packer, who is unable to provide himself with such facilities, leaves him but three choices: the restriction of his business to a local area; the use of the railroad ventilator refrigerator car, which is inadequate for the proper protection of fresh beef; or the practical withdrawal from the beef-packing business. Many have chosen the last course and are now confining themselves principally to the packing of pork products.

The situation regarding stock cars is somewhat different from that of refrigerators. The railroads have always furnished the larger part of this class of equipment. Some of the Big Five packers have their own stock-car equipment and quite a number of stock cars are owned by independent private car companies who lease them to railroads and shippers. Swift & Co. owns a considerable proportion, about one-eighth, of the double-deck stock cars in the country. It is important to a shipper of hogs, sheep, and calves to have the use of a double-deck car in preference to a single deck, because of the proportionately lower freight charges on shipments in this type of car. Swift & Co. is the only packer which owns any double-deck cars. By such ownership it is assured of being able to ship a considerable proportion of its live stock in its own cars and thus secure the benefit of the lower freight charges on its shipments. Other shippers who do not have their own stock-car equipment must use the kind of car which the carrier is prepared to furnish at the time of requisition. In many cases a single-deck car is supplied where a double deck has been ordered. In such cases the shipper is forced to pay approximately 11 per cent to 14 per cent higher freight charge on his shipments than in cases where double-deck cars are used. To that extent these shippers are at a disadvantage in their competition with Swift & Co.

The stock cars operated by the Swift companies not only are an advantage to the packing business, but also yield a very good return on the investment, averaging approximately 11.9 per cent during the past six years. The Fruit Growers Express, Inc., which is affiliated with Armour & Co., has also earned a good return on the investment,

amounting to 13.3 per cent in 1915, 16.5 per cent in 1916, and 24.9 per cent in 1917, according to estimates prepared by the Commission. Profits from car operation on the whole, however, in the packing business are not excessive. In fact, they could not be considered adequate if the car business were regarded as an independent institution. But they should not be so regarded, for ownership of cars is of such advantage that the centralized packer could well afford to make the necessary investment if the cars did not yield a single dollar of direct profit from operation. It has been difficult to determine the actual results to the car companies of some of the Big Five packers. The Commission estimates, however, that for all the Big Five packers and their affiliated companies the average net return was 6.8 per cent on the investment in 1912, 3.8 per cent in 1914, and 4.6 per cent in 1917.[1]

The intricate system of distribution of the Big Five packers has been built upon the refrigerator car. Through their branch houses and peddler car routes these large packers supply thousands of communities with fresh meat. This distributing system has enabled the packers to carry the products of their centralized plants to the door of the distant consumer and competitor; it has placed them on a par with the local packer in so far as the delivery of a product in fresh condition is concerned; this, coupled with their other competitive advantages, has enabled them in many cases to drive out local competition.

The refrigerator cars with their enormous freight tonnage have given the Big Five packers an influence over the railroads as far-reaching and as powerful as an instrument to their own aggrandisement as it is detrimental and destructive to the interest of their competitors. Freight rates are in force which both the carrier and the shipper know to be preferential to a particular packer. (See p. 180.) As to mixing rules, a single suggestion of one of the Big Five packers has at times been sufficient to effect a revision favorable to its interests. (See p. 182.)

The big packers' cars show a more rapid movement than the cars of their competitors, and consequently give better service and yield more revenue to their owners. The average daily mileage of the cars of the five packers in 1917 was 80.8 miles per car; that of their competitors' cars was only 54.5 miles. In 1914, the corresponding averages were 80.3 miles and 72.1 miles per car per day.

The wholesale grocer is particularly affected by the transportation advantages of the packers. The special mixing rules are highly favorable to the large packers in the transportation, not only of fresh meats, but of groceries and other unrelated products. They give lower minimum weight requirements than the wholesale grocer can secure, and they make possible for groceries included in meat cars an expedited service not open to the shipper using ordinary equipment. A similar advantage is given the large packers in connection with their "peddler" cars in which less than carload lots of groceries and nonpacking-house products are shipped with meat as way freight to thousands of towns and receive frequent and prompt transportation under cover of the special service designed for fresh meats. The inequalities in service which have thus been allowed to grow up give such an advantage to the packers as to

[1] Including profits from refrigeration.

amount to a special privilege and to that extent are contrary to the public interest.

In furthering their interest in stock yards and live stock markets, also, some of the Big Five packers have been able to exert an influence on the carriers. In one case a railroad closed a stock yard which was operating in competition with a packer-owned yard, in return for which concession the railroad received a part of the packer traffic from that point.

The concerted attitude of the large packers has ever been one of defiance to the railroads. They are united by a common interest while the carriers have been divided by the desire of each to capture the major portion of the packers' traffic; and the preferential treatment resulting from this situation has been one of the means by which the Big Five packers have been able to crush competition.

These packers cooperate not only in exerting influence upon the railroads to secure rulings advantageous to their interests, but they also unite in their effort to secure favorable action by governmental bodies. The report will cite cases (see pp. 195-198) where they have met together and agreed upon arguments to be presented in governmental hearings. It will also instance (see p. 198) united effort to influence Government employees who were in a position to aid in securing for them regulations especially desired.

In addition to operating refrigerator cars and other equipment on the lines of the carriers, the Big Five packers have entered other industries closely allied to transportation. Operation of icing stations on the main lines of through shipment from Chicago and St. Louis to the eastern seaboard has given to some of them a distinct advantage over their competitors. The stations have been operated at a profit and they have therefore been enriched by the performance of a part of the transportation service on their competitors' cars. They have secured the icing service on their own cars at those stations at cost. They have been able to secure, if they so desired, important information concerning the volume, route, and destination of competitors' shipments. They have had opportunity also, if they cared to use it, to discriminate against competitors by failing properly to perform the service of icing. The Interstate Commerce Commission, apparently recognizing the discriminations resulting from the private ownership of icing stations, recently decreed that the carriers alone should perform that part of the transportation service.[1] The result will be the withdrawal of the packers from this business.

Through their traffic influence the packers have also been enabled to extend their activities into other fields, such as the manufacture of the Ellis bumping posts by a company controlled by members of the Swift family. The "traffic club" has been used as a means of pushing the sale of this product.[2]

The refrigeration of fruits and vegetables by the Fruit Growers Express, Inc., which the stockholders of Armour & Co. own, and by five private car companies owned by the carriers has been a profitable undertaking. Examination of refrigeration rates leads to the con-

[1] The Interstate Commerce Commission in its decision and order of July 31, 1918, 50 I. C. C., 652, held that "The carriers only should perform the service of reicing and make the charges therefor, and that shippers of these products should not be permitted to perform the service of reicing their own and competitors' shipments en route, either directly or through corporations controlled by them."

[2] Mechanical Manufacturing Co. in which members of the Swift family own 55 per cent of the stock and members of the Morris family 6 per cent.

clusion that they have often been predicated without regard to the cost of the service, but rather with the idea of exacting all that the traffic would bear. This was especially true before refrigeration rates were brought under governmental supervision and control. The factor of competition did not enter in many instances in the establishment of these rates. The rates were made by the private car lines, which in some cases by exclusive contracts with certain railroads were given a monoply of the business on those railroads. Several of these exclusive contracts are still in force, the refrigeration rates, however, being now made by the railroads and being subject to the jurisdiction of the Interstate Commerce Commission.

The Fruit Growers Express, Inc., which is affiliated with Armour & Co., has been operating under exclusive contracts with various carriers for a number of years. It had a practical monopoly of the business of furnishing the carriers with refrigerator cars for transporting and refrigerating fresh fruits and vegetables from the more important districts in the Southeast, and it still has exclusive contracts with seven roads in that region. The report will show many complaints from shippers in that region alleging that the cars furnished by this company have been inadequate and unfit for the shipment of fresh fruits and vegetables. Complaints were more numerous a few years ago than they are at present, but the cars furnished by this company are not up to the modern standard of refrigerator-car equipment even now. Because of this monopoly as contractors with the carriers the shippers in the region are helpless to secure equipment from other companies; they must use the Fruit Growers Express, Inc., cars which are furnished them by the carriers. The result of being compelled to use this unsatisfactory equipment has been and is a loss to both producer and consumer. Though the Railroad Administration perfected designs for improved standards in refrigerator cars, it has not found it practicable thus far to build cars of the new type.

Investigation of the private car companies owned by railroad companies shows that the management of these companies has been efficient and the companies have been able to show, as a whole, fairly good profits from operation. The efficiency of these companies, which are especially organized for the purpose of operating refrigerator cars, indicates that these cars as a class can be best operated separately from other railroad equipment.

Independent private car companies organized for the purpose of owning special equipment and leasing it to shippers and railroads have for the most part been operating at a profit during the past decade. Some of the smaller companies have been unsuccessful, largely because of improper management. The private car business is naturally one which can be more efficiently and economically managed if of considerable size.

The private car was originally owned by shippers for their own use because the railroads refused to build refrigerator cars during the experimental stage. Cars were built later by private car companies and individuals, who saw an opportunity to earn a good return on their investment. The principal reason for private ownership of refrigerator cars and stock cars no longer exists. These cars are no longer experiments, but are necessities to the successful operation of modern business.

PART I

GENERAL SURVEY OF PRIVATE CAR LINES

CHAPTER 1.

DEVELOPMENT OF THE REFRIGERATOR CAR.

The market of any commodity is limited by two factors, the cost of transportation and the distance it may be transported without deterioration. Both limits are elastic; cheaper methods may be found for transporting freight, and goods ordinarily perishable may be preserved even while in transit. All goods are of course perishable to a certain extent, but some are not materially affected by weather conditions during long periods of time and others require only ordinary protection from weather. These classes, for purposes of transportation, may be considered nonperishable. Another class of goods, however, must be kept at a constant temperature from origin to destination as such goods will deteriorate rapidly in unfavorable temperatures. This last class is usually referred to as perishable freight, and comprises fresh meat and other products of the packing house, fruits and vegetables, fish, dairy products, and the like. Shipments of live animals can not properly be classed as perishable. They must, of course, be handled in a special kind of car and receive special care in transit. The greatest bulk of such traffic is of animals from which food is prepared.

Markets in the United States have undergone a phenomenal expansion in the last half century, so that products manufactured in one section of the country are now sold in every other; grain grown in the Middle West is consumed on both coasts; meat from animals slaughtered at Chicago, Omaha, and other western cities is included in the daily diet of New York, Boston, and San Francisco; and fruits and vegetables grown in Florida and California are sold fresh in the markets of every large city. The extension of the market of perishables has been made possible by the refrigerator car.

During the period of railroad growth and general commercial activity following the Civil War attempts were first made to maintain in a car a temperature at which perishables would be preserved regardless of outside temperature or weather conditions. Such an attempt was a novel one, for it must be remembered that stationary refrigerating plants were not at all common before the seventies, while many that were in use performed their functions but indifferently as compared with the thoroughly modern plant. Before the advent of mechanical refrigeration in transit perishables could be transported only to points that could be reached in a brief time. The market was therefore limited to the immediate vicinity of production. Where perishables were shipped, the speed of the train and favorable weather were the only surety for their arrival in sound condition.

The earliest attempt to send perishables under refrigeration, of which there is record, was made by Parker Earle, a farmer and fruit grower of Cobden, Ill. In 1866 he attempted to send refrigerated fruit to Chicago in chests capable of holding 200 quarts of strawberries and about 100 pounds of ice. These were loaded on express cars and hurried to the city. The experiment was not particularly successful for several reasons. In the first place, the refrigeration was not adequate; speed was still the principal factor in marketing the berries.

The whole method, moreover, was clumsy, as heavy freight charges had to be paid on the weight of the chests themselves. Some time early in the sixties the Michigan Central Railroad began experiments in carrying fresh meat east from Chicago. Ordinary box cars with bins for ice built in both ends were used. A platform built about 3 feet from the floor at each end of the car formed the bottom of the bin. A heavy door the width of the car was hinged to the roof. This door was raised to permit ice to be piled on the platform; it was then lowered to keep the ice from shifting. About two or three thousand pounds of ice was placed in each bin. Metal basins were placed to catch the drip of the melting ice, and a pipe drained this through the bottom of the car. This car was inconvenient in that it could be iced only when empty and inefficient in that it seems to have been able to preserve meat for a few days only. Certainly the temperature could not have been low and no circulation of air was provided.

Some successful shipments, however, were made in these cars from Chicago to New York by attaching a carload of meat to a passenger train as far as Suspension Bridge, New York, near Niagara Falls. It was there transferred to a fast freight train to New York. In this way meat would arrive in New York City within three days after being sent and was usually in good condition. The limited time which the shipment could be in transit, however, and the expense involved in this part passenger service prevented this method of transportation from being extensively used. About this same time the Pennsylvania Railroad set aside some 30 box cars for experimental purposes. These, under the direction of W. W. Chandler, who for a number of years was head of the Star Union Line, were fitted with double sides and the space between packed with sawdust. For cooling purposes a box filled with ice was placed on the floor of the car and the door sealed. This car became a large ice box on wheels. The cooling arrangement was changed somewhat later in that the ice instead of being held in a box placed in the body of the car was contained in two chests, one at each end of the car, hung by wire bands from the roof. This car had practically the same objectionable features as did the car of the Michigan Central, in that it could be iced only from the body of the car and it was without circulation of air.

In 1867, Mr. J. B. Sutherland, of Detroit, Mich., took out the first patent for a refrigerator car, followed the next year by William Davis, also of Detroit, who had been experimenting for several years. The Davis car became the best known of the early types and was used considerably during the next few years. Its performance, however, was not wholly satisfactory and not infrequently was it referred to as the "sweat box," a name probably due to the same fault which had been common in all the earlier experiments, namely, that the car had no provision for circulation of air. The cooling system of this car seems to have differed slightly from other types, in that cylindrical metal tanks of about 15 inches in diameter were placed at each corner of the car. It appears for some shipments, at least, that the ice in these tanks was mixed with salt to obtain a lower temperature.

The invention of this car induced Mr. Earle, of Cobden, Ill., to attempt another shipment of fruit under refrigeration. Apparently in the same year in which the car was brought out (1868), he sent a carload of peaches to Chicago in a car of the Davis type. This shipment, however, was a total loss. Subsequently he built a plant at one of his farms at Anna, Ill., in which he might cool the fruit before

loading it in a car. His first successful shipment of precooled fruit was made in 1872 and he continued such shipments during subsequent years with fairly good results.

The Tiffany car was patented in the early seventies. This had two V-shaped ice bunkers suspended from the roof, one on each side of the car running its full length. Mr. Earle turned his attention to this type and found it more satisfactory than the Davis car. As this car was, however, primarily intended for dairy shipments its ice capacity was small. Mr. Earle saw that shipments of fruit could be made without precooling if a car of sufficient ice capacity were used. Ripening fruit generates a large amount of heat, but if the fruit is thoroughly chilled the ripening process will cease or at least be checked considerably. Mr. Earle soon had a car of his own built, similar to the Tiffany car, but capable of carrying enough ice to chill the contents of the car thoroughly, as well as to maintain the proper temperature in the car for some time. In these cars of his own design he made many successful shipments. The idea of precooling fruit shipments was abandoned for some time, but has recently been found highly desirable for transcontinental shipments.

Others were now experimenting with the refrigeration of fruit, and an occasional trial was made from Michigan to New York or Boston. These experiments had universally been failures until well along in the eighties, although from then on successful shipments were regularly made. It can not be said, however, that any great volume of traffic developed, for those interested in the business were few, the cars available for use were not numerous, and the expense was still high. Other sections of the country were slowly beginning to take notice of this method for increasing markets. The first successful shipment of garden truck from Norfolk to New York was made in 1885.[1] Two years later a similar shipment was made from North Carolina. In 1888 the first refrigerated shipments both of oranges and berries were carried across the continent from California to New York. The following year Florida also contributed refrigerated oranges to the New York market. For several years prior to the above dates shipments of oranges had been made under ventilation during portions of the year, which means that the fruit or vegetables were placed in a car so constructed that the outside air was forced into it by its forward motion, while the air heated by the ripening products was permitted to escape. It is possible to use this method only for certain classes of shipments during a part of the year. It is still used to a considerable extent whenever possible.

FRESH MEAT SHIPMENTS.

Experiments of preserving dressed meats in transit had apparently not received a great deal of attention from the railroads after the Michigan Central's early efforts. This class of shipment not only deteriorates more rapidly than other perishable products, but being the most valuable, entails the greatest loss through spoilage. Some experimentation along these lines, however, was carried on, and although not credited with the first shipment of dressed meat from the Middle West to the eastern markets, Mr. Hammond, of Detroit, was the first to market western beef by sending it the entire distance by freight. He began shipping in a small way about 1871 and

[1] Twelfth Census of the United States, vol. 5.

achieved moderate success. What type of car he had is not quite clear, but it is known that in the car he used the meat came in contact with the ice and that it became discolored and spoiled rapidly when removed. To avoid this difficulty the carcasses were hung from the top of the car. It was alleged by some of the railroads that when the car was drawn rapidly around a curve a swinging motion was imparted to the hanging meat which in turn rocked the car. Several wrecks were attributed to this cause. Whether true or not, railroads advanced it as one reason for their lack of encouragement to this class of shipment.

At the time of the early experiments of shipping fresh meat under refrigeration, Mr. Nelson E. Morris was one of the largest cattle dealers in the Chicago market. In addition to dealing in live stock, Mr. Morris had operated a packing plant since 1859, and had built up a considerable business in the shipping of packed meat as well as the local selling of fresh meats. Considering how he might enlarge his market for fresh products, in the winter of 1874, Mr. Morris had risked sending a load of frozen beef to Boston in a box car. The meat arrived in good condition and a market for it was found. The following year numerous shipments of this sort were sent with generally good success. The venture was, however, necessarily confined to a small portion of the year, and even then, dependent as it was upon the variations in the weather, could not become general or extensive. The risk was too high—the loss too great. Evidently Mr. Morris was not familiar with the refrigerator car or he did not consider it a practical carrier for his business.

For a clear understanding of the situation it should be said that between 1870 and 1880 great strides had been made in stationary refrigerating plants, so that by 1880 every well-equipped slaughterhouse had its own chill and refrigerator rooms in which the meat products could be kept wholesome for long periods of time. The refrigerating apparatus used for stationary plants is not suitable for a freight car, where the requirements are that the apparatus shall not be unduly heavy or bulky and that it must be of sufficiently simple operation for a person of ordinary intelligence and without mechanical training. Meat supplied to local trade was not frozen, but was chilled to the point where it could be kept without deterioration.

The most influential figure in the development of refrigerator cars for shipping meat was Gustavus F. Swift. As a young man he had operated a small slaughterhouse on the Massachusetts coast, but later had turned to the cattle-buying business, and in that business had gradually worked his way west. For several years he had been interested in cattle buying at Buffalo, then the most important market of that kind in the country, but seeing greater opportunities at Chicago he went there some time about 1875. Apparently he did not immediately enter the packing business, but continued in the buying, selling, and shipping of cattle on the hoof. His operations were small. Undoubtedly he was familiar with all the then used appliances for preserving fresh meat, and was also aware of the attempts of Morris to transport frozen beef and with the attempts of others to accomplish the transportation of chilled beef with the aid of the refrigerator car. It may have been the possibility of the unlimited market which might be secured with the successful operation of the refrigerator car that led him to engage in the packing industry. His erection of a packing plant at Chicago and

his attempts to find a method of transporting the fresh meat to eastern markets in refrigerator cars followed close. The packing plant was apparently erected in 1880, but the dates for his first shipments are sometimes given as slightly prior to that time. Since the evidence is not complete, 1880 may be taken as a general date of Swift's interest in this new class of traffic, and it may be assumed that about that time he asked the officials of various railroads to furnish facilities for shipping his refrigerated meat. This the railroads flatly refused to do.

The refrigerator car was still a speculation. The construction of the car was expensive, and even if fresh meat could be shipped successfully there was no certainty that the volume of traffic which would arise would warrant the capital outlay needed. It was generally supposed at this early date that in warm weather a refrigerator car would be unsuccessful, and that even if the time during which fresh meats could be transported was enlarged it would still not be a year-round freight movement. Furthermore, the railroads at this time were going through the greatest period of extension in their history and probably were not interested in investing in expensive and experimental equipment. Moreover, the railroads had reasons to discourage the business of shipping dressed meat, as they then enjoyed a lucrative traffic in live animals and were well equipped to handle this class of business. A stock car was more advantageous for the railroad to own than a refrigerator car, for when not being used to transport stock it could be used, and often was used, for other freight. The refrigerator car is not adapted for general traffic, as will later be explained more fully. (See p. 48.) An additional consideration with the railroads was that the dressed carcass of a steer is less than 55 per cent of the weight of the live animal. At that time, besides the dressed meat, little, except hides, and fats, constituting about 10 per cent of the live weight, was used; the remaining 35 per cent or more was the waste material which was disposed of near the place of slaughtering. Thus by shipping the meat, hides, and fats only, instead of the live animal, the railroads stood to lose a great amount of tonnage which they would otherwise have transported.

A further reason for the railroads' reluctance to encourage the shipments of fresh meat is found in the influence of the various interests engaged in businesses coincident to the shipment of live stock. Among these were powerful cattle shippers who owned and operated loading docks and feeding stations on the lines of the carriers. Some of these stations were also owned by the carriers themselves, and in furthering the shipment of dressed meats they would destroy the utility of properties in which they themselves had money invested.

Whatever the reasons may have been Gustavus Swift saw that he could expect no assistance from the lines which carried large shipments of live stock. He then requested refrigerator cars from the Grand Trunk Railway, which, because of its circuitous route, enjoyed but little of the live-stock traffic. He was informed that the Grand Trunk would not build any such cars, but if he would furnish his own the railroad would route them over its lines. Although this arrangement would involve a great expenditure of money at a time when he had but little working capital, he had no alternative if he desired to enter the Eastern market but to build the cars himself. The marketing of Western beef even after refrigerator cars had been

secured was no easy task, for the consuming public had a notion that meat carried long distances and in transit for long periods of time could not be good. This idea was ably fostered by those interests whose business would be impaired by the shipping and marketing of dressed beef. Cattle shippers and retail butchers combined to prevent or curtail this new traffic, but in spite of the difficulties Mr. Swift was determined to make the venture. With great confidence in his enterprise he made arrangements with a Boston representative to market the products which he intended to ship East. He then went to Detroit and ordered 10 of the latest type of refrigerator car. This car was probably the Zimmerman type, similar to the Tiffany car, already described, in that it was equipped with V-shaped ice tanks. Moisture collecting on the bottom of these tanks dripped off on the meat suspended below; then, too, the tanks often became leaky, due to the method of filling them with ice. Large blocks of ice were put into the tanks and were broken up with pike poles. The poles often slipped from the ice and ripped holes in the sides of the tank. With these cars, however, he established his first route to the East.

In his search for a better car Mr. Swift secured the assistance of a Mr. Chase, an engineer of Boston, who discovered the correct principle of refrigeration in transit, namely, circulation of air within the car. Cool air is heavier than warm air and sinks, forcing the warm air in the car upward. The warm air is in turn cooled by the ice in the bunkers. It then sinks again, forcing the air which has been warmed by contact with the articles in the car upward. Two currents of air result, each flowing from a bunker at the end of the car and meeting in the center. Mr. Chase not only discovered this principle, but he also devised a practical method of applying it by fastening an ice bunker in each end of the car. The bunker is filled from the exterior of the car through an opening in the roof. This is closed by a plug which fits into the opening and is further sealed by a hatch door in the roof of the car. The principle of circulation of cool air and the general arrangement of the appliances of this car, by which the bunkers could be filled or replenished from the outside, are still in use, though various refinements for convenience or efficiency have been introduced. The car designed by Mr. Chase demonstrated its worth immediately. Other packers were not slow to recognize its value and had cars of their own built. The railroads found they could not afford to refuse this growing volume of traffic and were soon competing for it.

Among other pioneers in the development of refrigerator cars for the shipping of packing-house products were the Armour interests, Nelson Morris, Schwarzschild & Sulzberger Co., and later the Cudahy Packing Co., then known as the Armour-Cudahy Co., incorporated in 1887, with its principal plant at Omaha. Other smaller companies followed the lead of the larger interests in the building of cars as each was individually able. It will be noted that the cars which were thus used were owned by the companies interested in the transporting of their own products. This situation has continued to the present time; the railroads have never attempted to supply themselves with cars capable of meeting all the requirements of the packing business.

The refrigerator car is not the only type of equipment which is privately owned. About the same time that the refrigerator car was being developed the oil interests found it to their advantage to ship oil in tank cars. This type of car is now in general use for the ship-

ment of all kinds of liquids in bulk, and although the railroads now own a considerable number of this kind of car, a great many are also still privately owned. Tank cars are used in the packing business in the shipping of soap stock, tallow, greases, cottonseed oil, and the like. There are other types of cars which are privately owned, but the refrigerator car and the tank car comprise the bulk of privately owned equipment.

HEATER CARS.

It is sometimes necessary to provide for the heating of a car to prevent the products from freezing. This is not usually the case in the shipment of chilled meat, however, for it has been found that this product can be carried more safely in a refrigerator car under refrigeration than in any other way. If care is taken with the icing of the car a constant temperature may be maintained within the car whether the exterior temperature is higher or lower than that desired for the interior. Heater service is provided by a few railroads, however, during the coldest weather to prevent fresh meat from freezing. Where heating service is provided the shipment is made in a refrigerator car rather than in a box car, in order to obtain the advantage of the insulation for the retention of the heat. Such service is usually applied only in cases of local shipments or on peddler car routes. Fresh fruits and vegetables sometimes require heat in transit. Banana shipments often require protection from frost, which is provided either by a portable stove within the car or by running the car into a heated shed and opening it.

TYPES OF CARS IN USE.

There are at present in the United States two distinct types of refrigerator cars. One is known as the beef car or brine tank car, the other as the ventilator refrigerator car. These two types are alike in general shape and size. The main distinction is to be found in the cooling system. In the beef car two tanks are situated in each end of the car. These tanks are covered by hatch doors which may be opened to permit the tanks to be filled with ice from the exterior of the car. Crushed ice mixed with salt is usually used in refrigerating fresh meat shipments. The percentage of salt varies according to the temperature of the outside air and the kind of product shipped. It is seldom less than 8 per cent or more than 15 per cent. The tanks retain the cold brine, and a lower and more constant temperature is thus maintained than is possible if ice alone is used. When the car is reiced the accumulated brine is released. The ventilator refrigerator car has an ice bunker at each end of the car. It can also be filled through two hatch doors over each bunker. Block ice is usually used in this type of car. The meltage is carried off through a pipe at the bottom. Bunkers differ from each other slightly in construction. Some are made of slats which overlap but which do not touch each other, the space between admitting the passage of air. The latest type in use is known as the basket bunker, which, as the name implies, is constructed of wire mesh and admits still freer passage of air.

The beef car is usually more heavily insulated than the ventilator refrigerator. It is also specially equipped for the shipment of fresh beef in that it has a system of rails running crosswise in the car at the roof, from which carcasses of meat are hung by means of

hooks. The ventilator refrigerator car although sometimes used for shipping fresh meat can not successfully preserve it for long distances. Particularly is this true during the warmer months. The ventilator refrigerator is therefore generally used only for fresh fruit and vegetable shipments and for the less perishable of the packing-house products. No refrigeration is necessary in the shipment of some fruits and vegetables during a part of the year. When the free circulation of the outside air is sufficient, no ice is put into the bunkers of the refrigerator car and the hatches are left partly open to catch the air and force it through the bunkers by the motion of the car. Some cars have an arrangement on top of the hatch opening in the form of a scoop, which catches the air more effectively than the partly open hatch door.

Some insulated cars have no ice bunkers or tanks whatever. When perishables are shipped in such a car, ice is placed about the package. Such a shipment is frequently referred to as "ice on top" or "ice packed." Beer, fish, and dressed poultry are the commodities most frequently transported in this manner. Such shipments are occasionally made, too, in an ordinary box car. Insulated cars, such as described, are usually old refrigerator cars from which the bunkers or brine tanks have been removed and the hatches sealed. An insulated car without a cooling system is very seldom built.

The shipment of perishables is no longer a speculation. Shipments of fruits and vegetables or of fresh meats and packing-house products can now be made with comparative assurance that the products will arrive at market in good condition. Losses occur in the shipment of perishables, of course, as in the shipment of all other freight, but the percentage of claims for loss or damage in transit is small and the claims which are made are, as a rule, based on the improper performance of the icing service or on unusual delays to the car rather than on any defects in the car itself. (See, however, p. 165 ff.)

The Refrigerator Car Committee created by the U. S. Railroad Administration[1] has recently approved specifications for a refrigerator car in which they have embodied all the best features in use at the present time. This car contains no new idea in refrigeration systems. The committee has used the principle of air circulation, the worth of which has been demonstrated by adequate experiment, and has refined and perfected the instruments in the construction of the car that were needed to secure the best refrigeration possible. This car will be heavier and better insulated than any car now in use. Improvements will be made as better devices for mechanical refrigeration or heating are developed, but it may safely be said that for the transportation of perishables in the United States the car recommended by the committee will adequately meet any demands that may be placed upon it.

The Railroad Administration, however, was unable as a practical matter to undertake the construction of refrigerator cars of the new type during the war, and is understood to have no funds at present for this purpose. The railroad companies, themselves, have taken no steps, as yet, to construct additional cars.

[1] This committee consists of two experts representing railroads, two representing private car companies, and two representing the Bureau of Markets of the Department of Agriculture. L. L. Yates, superintendent of the car department of the Pacific Fruit Express, is chairman.

CHAPTER 2.

THE REFRIGERATOR CAR AND THE DEVELOPMENT OF THE INDUSTRY.

PACKING INDUSTRY.

The refrigerator car made possible the development of the great centralized packing industry. Before its use slaughtering was a local business; now fresh-meat shipments are a part of international commerce. Without the refrigerator car ordinary improvements in transportation could have affected the packing business but very little. Cheaper transporation could not increase the market materially. Faster transportation could make but little difference, for regardless of the speed of the train the meat would spoil before it could be transported any great distance if mechanical refrigeration were not provided. The only meat products which could be shipped a considerable distance before the advent of the refrigerator car were those which had been dried, cured, canned, or otherwise preserved. Many of these products were packed in containers with salt or brine, from which fact the "packing house" takes its name. Some of the larger plants shipped these products extensively.

Previous to the shipment of fresh meats under refrigeration the packing business was necessarily in the hands of those butchers who slaughtered in or near the community where the meat was to be consumed. No concentration of the industry in the hands of the few was possible. As the population moved from the Atlantic seaboard westward and new centers of population grew up in inland territories new packing plants had to be built to supply those communities with fresh meat. Thus the business field was continually open to new enterprise. It must not be thought, however, that the earlier packing plants were necessarily small. Some of the abattoirs situated in densely populated New England were large in those days and would be considered important even now.

As early as the Civil War much of the cattle, sheep, and hogs slaughtered in eastern plants were western animals. Cattle especially were furnished by the West, for they could be raised much more plentifully on the extensive plains there than in the East. Then, too, eastern cattle were largely milch stock which were usually slaughtered only when unfit for other use, while western cattle were raised for no other purpose than for food and were shipped for slaughter when in prime condition. The western cattle, having advantage of the abundant food of the plains, produced a better quality of meat than the milch animals raised in the East, though eastern animals raised for beef purposes, no doubt made as good meat as that of western steers slaughtered in the East after their long journey from the plains.

The cattle markets of the West were growing rapidly during the period following the Civil War, and they soon became larger than

the older eastern markets. Cincinnati was for a time the largest, but Chicago finally surpassed it and became, as it still is, the greatest cattle market in the country. There were packing houses situated at Chicago at an early date; the earliest plant of any of the companies now known as the Big Five was established in 1859. These plants supplied fresh meat to the local trade of the rapidly growing western cities and were in a particularly advantageous situation for securing live stock. They shipped a considerable quantity of cured meats, but they did not absorb any large proportion of the live stock of the Chicago market. A majority of that stock continued to be reshipped to the eastern packing plants for a number of years.

With the advent of the refrigerator car a revolution swept over the meat industry. The fresh meat and the perishable packing-house products could now be shipped to any point. There were of course difficulties to overcome: The imperfections of the car itself; the prejudice of the buying public against refrigerated meat, which was industriously fostered by local butchers and cattle shippers; and the hostility of the railroads. These handicaps were, however, gradually overcome, and the shipping of live stock to the eastern seaboard began to decline.

Beginning about 1880 larger plants were erected at Chicago, and the small plants were enlarged so that they were soon capable of supplying a part of the eastern trade as well as the local market. Other plants were also erected at still farther western points, such as Omaha, Kansas City, and other western cattle markets, as they grew into importance. The fresh meat of the animals slaughtered in these plants began to be sold in every city of the United States, and the concentration of the meat industry had begun.

By this time the sectionalization of the stock-raising industry had reached such a point that, in general, it may be said that the producing areas were in the West and the consuming sections in the East. The western movement of population has never changed this balance. At the present time 70 per cent of all cattle, other than dairy cows; 70 per cent of all sheep; and 51 per cent of the hogs are raised west of the Mississippi River. On the other hand, 69 per cent of the population of the United States lives to the east of it. It is therefore clear that in whatever form animal produce may be shipped an average long haul is necessary from the producing areas to the consuming centers. It is also evident that the haul must be made up of two distinct shipments, the first being the shipment of the live animal to the slaughter house and the second of the fresh meat and packing-house products to the consumer. Before the time of refrigerated transportation shipment on the hoof was by far the longer of the two. After the refrigerator car came into general use the transporting of live animals for long distances was no longer necessary, as the dressed product could be shipped practically any distance without deterioration. However, a considerable number of cattle are still shipped from the West to New York and Philadelphia for "Kosher" killing for the trade demanding it.

Advantage of dressed shipments over live shipments.—The comparative advantages of live shipments and dressed shipments should be considered. Live animals are shipped in a car of special design known as a stock car. The sides are not solidly built but are composed of slats, as is also the door. Some cars are equipped with feeding

troughs on the side of the car. Frequently hogs, sheep, and sometimes calves are carried in a double-deck stock car which, as the name implies, has two floors or decks upon which to load the animals. A stock car has certain advantages over the refrigerator car. In the first place, the cost of building a stock car is much less than the cost of a refrigerator. The cost of maintenance is also less. The freight rates on live stock shipments are usually somewhat lower than the rates on shipments of dressed meat. At first glance it may seem, therefore, that the shipment of live stock is the cheaper and more desirable method of transportation.

The shipment of live stock, however, lacks certain fundamental conveniences and economies attendant to the shipping of fresh meat which greatly outweigh the advantages of the live shipment. A steer of 1,000 pounds weight will "dress" to about 550 pounds of fresh meat. The remainder of the animal, which forms the basis for the by-products of the packing industry, must go through additional processes before it is ready for consumption. Many of these products, even when in their final form, have no adequate market in the communities where the fresh meat is sent. When shipped alive the entire animal must be carried to one point but when the animal is slaughtered in the producing sections, segregation of the various products may be made before shipment and the proper quantity of each product may be sent to the consuming district where it is in demand. Some of the less perishable and nonperishable products take a lower freight rate than either the fresh meat or the live animal and economy in freight charges is therefore effected. Economy in equipment may also be secured, for the nonperishable products may be shipped in ordinary box cars.

There are also certain direct disadvantages in shipping live animals a great distance. One of the most important is that the animal always "shrinks." Range cattle shrink more than stall fed, probably because the range cattle are unaccustomed to any confinement, are more restive, and eat less in transit than the stall fed animals. The shrinkage of sheep is greater than that of other live stock. The percentage of shrinkage varies for the different kinds of stock during different seasons of the year, but it may be said that, generally speaking, the shrinkage is a little less than 5 per cent of the gross weight of the animal on an average shipment from the Middle West to the Atlantic seaboard. When railroads allow for shrinkage in fixing the freight rate it is figured on that basis. Fresh meat also loses some weight in transit, but such loss is insignificant.

Impairment of the quality of the meat is another important item in the shipment of live animals a great distance. Even though animals have been carefully fattened they will not produce the finest quality of meat if they are shipped a great distance for slaughter. The most direct loss in shipping animals alive, however, is the death of the animals in transit. This is a large item only on long journeys. As stock cars are unprotected from the weather the live stock suffers from extremes of heat or cold. Hogs apparently have a higher mortality in transit than other animals. Smothering is most frequently the cause of their death, although a large number freeze to death during extremely cold weather. Except for their hides or skins dead animals are used only in the production of nonedible greases and fertilizers, or "tankage," so that the value of animals

which are killed in transit is very small in comparison to their value alive.

Stock in transit must be unloaded for rest, food, and water at intervals prescribed by the laws of the various States and by Federal statute. Considerable delay is caused by this necessary unloading and reloading of the stock. The cost of the feeding; the charges for the additional switching of the cars; and the expenses incidental to the loading and unloading of the stock are items of considerable importance which should be considered in calculating the cost of shipping live animals. It is very difficult to obtain accurate figures on these expenses incidental to the shipment of live animals, for they are borne by the individual shipper, who in a majority of cases does not keep his records sufficiently complete to show the information accurately. From the information submitted, however, it seems safe to assume that, exclusive of the regular freight charges, the incidental expenses of shipping a car of live stock, that is, the loss from shrinkage and death and the cost of loading, unloading, feeding, bedding, etc., is at present not less than $100 for a distance of 500 miles.

Fresh meat in transit also requires special care and involves additional expense. The ice tanks or bunkers must be replenished en route, but the delay caused by this operation is less than that involved in the feeding and watering of live stock. The relative cost of feeding a carload of stock and of icing a car of fresh meat can not accurately be determined, for the two shipments are very different. It is safe to assume, however, from data collected and from various tariffs of icing charges, that for a shipment of 500 miles under average conditions, the cost of icing will not exceed $25 per car.

The shipment of dressed meat then is more advantageous than the shipment of live stock for the following reasons:

1. A particular market can be readily supplied with the animal products needed at that point.

2. Nonperishable products of slaughtering may be sent in ordinary equipment at freight rates lower than the rates on live stock. Economy in equipment and freight charges is thus effected.

3. Loss from deterioration of quality, shrinkage, and death of animals in transit is practically eliminated.

4. While both classes of shipment require special care in transit, fresh meat can be cared for more expeditiously and with less expense.

Private car companies have been able to furnish only to a very limited extent, beef cars to those packing companies which could not afford or did not care to invest in this class of equipment. Practically all the beef cars now operated are owned by the companies whose products they carry. The few packing companies which in the very beginning acquired a supply of cars secured a tremendous competitive advantage over the companies which failed to provide themselves with such facilities, since these companies were able to build their plants at points advantageous for securing in the greatest number the live stock supply needed. Their plants were located with but little reference to the markets in which they intended to sell. With the aid of the refrigerator car the western packer was able to furnish fresh meat to the eastern market which was both cheaper and often better than local slaughterers could supply from cattle raised in the West; better because the animal had not been

subjected to the additional journey of a thousand miles or more to the eastern seaboard, and cheaper because of the advantageous location of the packing plants in the producing territories. The meat, however, was presumably little better or cheaper than beef produced locally in the East, though under the freest competition the East could not have produced any large part of the supply it required.

Changes in live-stock production.—A great change in the production of cattle for slaughtering took place while the packing industry was expanding. This was partly due to changes occurring in the packing industry, but was also dependent upon other more general causes. Even at an early period there was a considerable demand in the East for western beef. Cattle fed exclusively on range grass, however, do not produce the same quality of meat as cattle fattened on corn. In the early period the range cattle were shipped to the East for fattening. The farmers of Illinois and Iowa were shipping a large part of their corn to the East for that purpose. After the establishment of cattle markets in the West the farmers in that district saw that they could buy the leaner range-fed cattle in the market, fatten them on their farms, and reship them to the nearby slaughterhouse as prime beef at a profit. This became an especially attractive business since more and more of the range-fed cattle were being shipped to market quite lean. The population was moving westward and the opportunity for extensive cattle droving was becoming limited. The fattening of cattle thus became one of the important businesses of the farmers of the Middle West. The proportion of corn which was shipped out of the producing district declined. In fact, the fattening business became so extensive that it was not unusual for the corn belt farmer to buy corn for feed to supplement that which he raised. This change in cattle production assured the western packer a supply of animals which were in prime condition and it assured the consumer a desired quality of meat. A natural impetus was given to the raising of sheep and hogs by the increased demand, but no essential change occurred in the character of these industries. Hogs have always been raised in the more cultivated sections and as the farmers pushed west of the Mississippi the hog industry naturally progressed in that direction.

Changes in method of distribution.—Great as was the change in the production of meats and meat products brought about by the refrigerator car, a still greater change occurred in marketing the products. It was necessary to have some agency in each consuming district to receive and distribute the products from the packing house. To perform this work branch houses were established throughout the country. These places did no slaughtering whatever but acted as receiving and storage rooms. Packing-house products were shipped to the branch houses by the car load and stored in the refrigerator rooms until sold. By this means the large centralized packers became as well equipped as the local slaughterers for the furnishing of fresh meat to the retail dealers. In fact they were better prepared to supply the local trade than the local packing house, for they had a greater variety of products.

For supplying those outlying districts the trade of which was not sufficient to warrant the erection of a branch house, the peddler car was devised. This is a refrigerator car which is loaded with various assortments of products to be disposed of at certain designated places

along a given route. Usually an agent of the packing company operating the peddler car travels along this route and takes orders which are to be filled from the car. Articles ordered by local dealers are unloaded at the various stations along the route. A number of towns can thus be supplied by one peddler car. This system is now in extensive use and the cars are operated from central packing plants as well as from the branch houses.

Occasionally the railroads maintain peddler-car routes with their own equipment. Although they have no brine tanks, the cars of the carriers are usually adequate for peddler service, as the route is never very long. Peddler cars, however, are more frequently a part of the equipment of the packing company whose products they carry.

The peddler car has become the supply house on wheels by which it is possible readily to open up new markets. Practically no expenses other than those of the salesman and of transporting the product are incurred in sending this car into new territory. Since the cars can run wherever there is a railroad the most remote part of the country may easily be reached. When a market grows to such proportions that the erection of a branch house seems warranted, one may be placed in that locality, and the car or cars used to supply the district may be sent to develop still other markets. On the other hand, if it be found that a car route is not doing sufficient business to be profitable it is an easy matter to withdraw the car or change the route. As no buildings are erected and no capital is directly invested no loss is incurred in thus changing car routes. The flexibility of this new system of marketing is its most noticeable feature. Before its use a new market for fresh meat could be developed only by the erection of an abattoir or a branch house. This required a considerable investment of capital and also presupposed that the market would be fairly large and constant. The new system of marketing can supply a small market as readily as a large one. As a matter of fact the packers are pushing the peddler-car system into the heart of the producing region itself.

With the spread of the system of branch houses and peddler-car routes small place was left for the local slaughterer, who was previously so important. The supplying of fresh meat to the country, by these changes, is passing from the hands of numerous small dealers into those of a few large operators. The retail dealer often does not now have the choice of buying either from a distributing agency of the Big Five or from the local slaughterer, for in many communities the latter no longer exists. The refrigerator car has changed the methods of production and distribution of meat and packing-house products so radically that the packer who does not own cars can not now compete successfully in fresh meats in distant markets with those who do have them. Moreover, the packer who does not own cars is at a disadvantage in distant markets with respect to some of his other products as well.

Export shipments.—It has been seen that marketing of fresh meat became national; another step remained—to make it international. This was done about 1884. Steamships were then fitted with refrigerator rooms. For this class of shipment it was found desirable at first to send the beef frozen. The freezing was done before it left the packing plant. At present it has also been found practicable at times to export chilled beef.

Both frozen and chilled meat may be successfully transported only in a brine-tank car, for the temperature in the car must be kept below the freezing point. This temperature can not be maintained in a ventilator refrigerator car for any length of time. As most packing houses are situated some distance from seaboard, a comparatively long time is usually necessary in transporting meat to the ship's side. A car load of meat also often arrives at seaboard before the ship is ready to load, and the meat may therefore have to be kept in the car for some time. If a ventilator refrigerator car were used, it would probably be necessary to unload the meat from the car and store it in a refrigerating plant until it could be loaded into the ship, as it would be unsafe to leave it standing for any length of time in such a car. A vast majority of export shipments of beef are therefore carried in brine-tank cars, but some export shipments are carried to seaboard in other types. The risk involved in using a ventilator refrigerator car for this traffic is high. The packer who owns no brine-tank cars is practically excluded from the export business, since it is almost impossible for him to secure this type of car from outside sources.

Diversity of products marketed.—As the market of the packing interests has widened the variety of their products has correspondingly increased, not only by an intensive use of the by-products of slaughtering but also by control over nonpacking-house products. The system of marketing through the branch houses and peddler car routes proved so effective as a method for the distribution of meats that the packing interests have come to use it for marketing other products as well, such as cured and tinned meats, soap, oleomargarine, cleansing powder, dried glue, and the like, or with other products not connected with the packing industry but in which the packers are interested, such as canned milk, canned fruits, and vegetables, cheese, poultry, butter and eggs, and other products varying with the activities of each individual packer. The branch house handling such a diversified list of products has thus become a veritable wholesale market. It naturally became an attractive place for the retailer because of the great variety of goods handled.

All these changes may be attributed to the advent of the refrigerator car. Without it great plants, located with reference to live stock supply rather than to consuming markets, could not have been operated. Without great plants, by-products could not be used so efficiently. Without the refrigerator car vast markets, international as well as national, could not have been built up and distribution to every portion of the United States by the branch house and peddler-car system could not have been accomplished. Without such facilities for marketing, so many collateral lines of business would not have been entered. The refrigerator car is the instrument upon which all these factors depend. It has made production and distribution effective. It has made possible great concentration resulting in monopolistic conditions in the packing industry and permitted its control of numerous collateral lines of business.

FRUITS AND VEGETABLES.

It has already been stated that the increased facilities for the transportation of perishables caused great changes in the fruit and vegetable industry as well as the meat-packing business. Like the

packing industry, the raising of fruits and vegetables was, before the days of refrigeration in transit, a local business. Only crops which could be transported for long distances without refrigeration could be raised in sections of the country not in close proximity to market, for even though the soil in those sections might be especially adapted to the raising of fruits and vegetables, they could not profitably be grown in any large quantity because of the impossibility of transporting them to market. Private car companies in the earlier stages of their development did a great deal to advertise the refrigerator car as a means of carrying perishables to market. If the operation of the refrigerator car was to be profitable, it was necessary not only to solicit the freight for it but also actually to create traffic which would demand such a carrier. The private car companies did a great deal in developing specialized productive areas and in thus producing a better and more abundant supply of fresh fruits and vegetables.

Many analogies exist between the development of the fresh-meat traffic and the fruit and vegetable business. There are, however, certain fundamental differences which should be pointed out. The shippers of fresh meat have for the most part furnished their own transportation facilities. This situation has enabled a few packers to secure a commanding position in the industry. In the fruit and vegetable business, on the other hand, the private car companies and the railroads have usually furnished the cars to shippers and the industry is one that is not concentrated in the hands of a few. In producing fruits and vegetables the principal factor is land, and no small group of companies or individuals can secure control of sufficient territory to form a monopoly.

The effect of the refrigerator car on the fruit and vegetable industry can be shown best by describing briefly the growth of various sections now well known for their products, showing the relation which the refrigerator car has had to that development.

Citrus fruit had been grown in California since the middle of the nineteenth century and some quantities were shipped under ventilation at an early date. The California fruit trade therefore attracted the attention of the experimenters of refrigerator cars from the first. Several car companies were formed primarily to furnish cars for the California trade. At one time there were five car lines competing for the traffic. The refrigerator car stabilized the citrus-fruit industry and aided in its development until it has now become the most important perishable crop movement in the country. Before the introduction of the refrigerator car deciduous fruit was not shipped to any great extent from California, but since that time it has also developed until it is now a very important movement.

The situation which developed in the berry industry in one region west of the Mississippi River is notable. Some berries were grown and marketed near Denver, Mo., and Ledville, Mo., before the advent of the refrigerator car. The section seemed to be particularly adapted to this culture. The berries were shipped only in small lots and always by express. Naturally high prices were charged for them not only because of the risk of spoilage in transit but also on account of the large expense involved in express shipments. It was possible to obtain these high prices in the West because of the mining boom at

that time, but as the supply of berries increased and the mining boom declined it became increasingly difficult to market them at profitable prices. The result was a temporary decline in the business. This was about 1886, by which time refrigerator cars had practically passed the experimental stage. It was somewhat difficult to secure cars for the movement of berries from this section, but a few were obtained, and the product was then shipped by freight under refrigeration. The declining industry was revived and it has continued to grow until the movement from the district now amounts to 2,000 cars annually.

Even before refrigerator cars were in extensive use, Florida had grown a large quantity of citrus fruit which was shipped under ventilation during certain seasons of the year. Very little attention was paid to the growing of vegetables at that time, as it was more difficult to transport them and they were less profitable than the fruits. In 1893, however, a serious freeze destroyed or damaged a large number of the citrus-fruit trees. The growers found themselves in financial difficulties and were glad to turn to the growing of other fruits and vegetables as a means of relief. The vegetable industry, thus begun as the result of a crop failure, has continued to develop until it now forms a large and important movement from Florida. The citrus-fruit industry has also since recovered and is of importance. These products are now marketed the year round with the aid of refrigerator cars.

J. H. Hale, of Connecticut, with some others had been making experiments on peaches in the eighties and had propagated the Elberta peach. In seeking a section of the country adapted to the growing of peaches the territory adjacent to Fort Valley, Ga., was selected. Here the soil conditions were found adequate to produce a highly colored and well flavored peach which would come to maturity at a time when there was a big demand in the Atlantic coast markets. Thousands of acres of peach trees were set out. The railroads had never handled any large volume of carload perishable freight from that territory. Consequently when the trees started to bear and a large crop was promised about the year 1893, the carriers' problem of furnishing sufficient transportation facilities to move the crop was a serious one. Practically every refrigerator line in the country was called upon to assist the southern railroads in the first large movement. The carriers, then realizing that the movement would be of increasing importance each year, made arrangements to handle it in the future. The business has continued to grow until it amounted to approximately 8,000 cars in the year 1918. Growing sections in South Carolina have also been developed and have contributed largely to the southern peach crop.

The growing sections in Mississippi, Alabama, and Louisiana have also been greatly encouraged by the refrigerator car. The raising of tomatoes in Texas was developed primarily through the efforts of private car companies interested in developing the traffic. Eastern Texas has a soil heavily impregnated with iron, and it is therefore desirable territory for tomato culture. It was very difficult, however, to interest the Texas farmer in growing tomatoes, for the staple crop of that section was cotton. This difficulty was overcome by the representatives of a private car company who induced settlers in

the tomato district of Mississippi to move to Texas and start the industry there. The business thus begun has grown until it now averages over 2,000 carloads annually.

Another development in Texas industry was the growing of onions. The Department of Agriculture had recommended, among other things, that the Bermuda onion be grown. After considerable difficulty a small quantity of seed was secured, which was grown only in Teneriffe, one of the Canary Islands. A better onion was produced in the rich Texas soil under irrigation than had previously been grown. From a few hundred bushels the first year the movement has steadily increased until in 1917 over 5,000 carloads were shipped from San Antonio and Loretta alone.

The refrigerator car and the private car companies have been a great aid in a larger and more scientific development of the fruit and vegetable industry. Whereas formerly each section was limited to the amount and variety of perishable fruits and vegetables which it could produce itself, and limited as to the season in which they could be grown, now the variety of goods obtainable in the markets at any time is limited only by the country's entire supply. The goods are shipped under refrigeration from the specialized producing areas to large markets and are available in a fresh condition to the consumers there.

CHAPTER 3.

RELATIONS OF PRIVATE CAR LINES WITH THE RAILROADS.

Private cars are a recrudescence of the earliest practice when railroads were expected to furnish the roadbed and motive power and the shipper the vehicle. The early history of the relation between the carriers and the owners of private cars is somewhat obscure. Some authorities declare that a mileage allowance has been paid by the railroads since 1867, while others contend that this practice was introduced at a somewhat later date. It seems clear, at least, that the present practice of paying mileage on both the loaded and empty movement of private cars was not introduced for several years after the advent of the refrigerator car. This change was a result of competition between carriers, and was made sometime in the eighties when a comparatively new railroad line running west of Chicago entered into contract with one of the large packers to pay 1 cent per mile on both the loaded and empty movements of refrigerator cars. In order to meet the competition other roads quickly followed its lead and the 1 cent rate became firmly established in western territory. This transaction was a result of competition for tonnage and marks the beginning of the complicated arrangements that quickly developed between the packers and the railroads.

For almost 40 years the struggle between the packers and the railroads has continued; the packers seeking to exact higher mileage payments and other transportation concessions, and the railroads attempting to keep down their payments for the operation of private cars. As each road was striving to secure the maximum portion of the packer traffic, none dared go too far in insisting upon reasonable mileage rates for fear of antagonizing the packers and losing its share of the coveted prize, the packers' traffic. The points of contention in this struggle have been numerous and varied. Only those factors of present concern will be discussed here, and a brief outline given of whatever data may be necessary to aid in understanding the question.

Chief among the present factors of railroad operation of private cars are the following: Mileage and per diem payments, commissions, refrigeration and icing, car service, peddler cars, demurrage, Master Car Builders' rules, mixing rules, and minimum weights.

MILEAGE RATES.

Mileage allowances are payments made to private owners of cars for the operation of these cars on the lines of the carriers. The payment is based on the actual number of miles the car travels on the lines of the railroad, and each railroad line or system pays the owner a certain rate per car per mile. It seems that there was little uniformity in the rates, except among competing carriers, previous to

the nineties. The rates were not under regulation by any governmental body and varied considerably in different parts of the country. The range in the eighties was apparently three-fourths cent to 1 cent per mile. In 1893 the rate for refrigerator cars west of Buffalo, N. Y., was generally 1 cent. In November of that year a rate of 1 cent was established by western carriers and three-fourths cent as a general rule by eastern carriers. In general, it may be said that these rates in force in 1893 remained until 1917, although there were a few variations of the allowance in the East. In 1909 a 1-cent rate was allowed on refrigerator cars moving from St. Louis to the Illinois-Indiana State line. The Wabash Railroad paid 1 cent on movements to Buffalo. Other variations in rates were in practice in this territory, but as a general rule the rate to the East was three-fourths cent.

On October 1, 1917, the mileage rate on refrigerator cars between all points east of the Mississippi River was increased to 1 cent. The present rate on refrigerator cars on both the loaded and empty movements is 1 cent per mile between all points east of El Paso, Tex., Albuquerque, N. Mex., Salt Lake City and Ogden, Utah. All territory west of an imaginary line connecting these cities is known as the transcontinental zone. The mileage allowance granted by the railroads operating in this zone is different from the practice to the East; the rate varies according to the distance of the haul. On private refrigerator cars traveling 800 miles or less the payment is six-tenths cent per mile, when moving loaded. When the distance traveled is in excess of 800 miles, three-fourths cent is allowed. If, however, private cars are loaded with freight not requiring refrigeration the rate is uniformly six-tenths cent per mile, regardless of distance. No allowance whatever is made for refrigerator cars or any other kind of car privately owned, when moving empty.[1]

The present rate on privately-owned coal, coke, stock, and box cars of various kinds is six-tenths cent per mile. Until recently the rate on tank cars has been uniformly three-fourths cent per mile; on live-poultry cars generally three-fourths cent; and on palace stock cars generally six-tenths cent per mile, except on a few lines in the Southeast, which allowed three-fourths cent. By recent order of the Interstate Commerce Commission the carriers are required to establish the payment of 1 cent per mile on both the loaded and empty movements of privately-owned tank cars, live-poultry cars, palace stock cars, and heater cars.

Mileage deduction through terminals.—Mileage which would naturally accrue to the credit of the private car owner for the distance traveled by his cars through terminals has not been granted by the railroads. The reason for this practice is perhaps the fact that mileage could not reasonably be computed for the switching movement of cars, and the railroads therefore developed the practice of deducting mileage in a through movement, included between the switching limits of all terminals. For example, the mileage on a shipment from Chicago to New York is computed as follows: From the outer switching limits of Chicago to the western limits of the Toledo switching district; from the eastern limits of Toledo to the western limits of the Cleveland switching district; from the eastern

[1] The mileage rate in the transcontinental zone has been changed to 1 cent per mile for both loaded and empty movements, to become effective on or before May 15, 1919 (52 I. C. C., 240).

limits of the Cleveland district to the western limits of the Buffalo district; and so on, to the outer switching limits of New York City. Practice in this respect is, however, not uniform. While it is the general rule for railroads to deduct the mileage movements through the switching limits of important points, yet a few allow the full mileage from the switching limit of the point of origin to the switching limit at the point of destination. This additional mileage is granted only in cases where the shipment moves from point of origin to destination over one line.

In view of the fact that railroad terminals and switching facilities in our important cities average from 10 to 12 miles, this question of mileage deduction is an important one. In Chicago alone a car may be moved on a straight line haul through the Chicago switching limits a distance of about 30 miles. Car owners do not urge that the mileage of their cars within switching limits should be computed, for if this were attempted it would probably result in needless confusion and unfairness. Railroad representatives concede that the mileage should be computed for the total distance from the point of origin to the point of destination, including the straight distance through city switching limits, but not the distance actually traveled in switching movements.

Per diem payments.—Allowances by the railroads for the operation of private cars have always been on a mileage basis. In fact, the per car per mile basis was the only one known in railroad usage up to 1902. At that time payment for the use of railroad-owned cars on foreign lines was changed to a per diem basis, under which the owning road receives from the foreign road, under interchange regulations, a specified rate per car per day. The per diem rate in 1902 was 20 cents, with a penalty attachment of 80 cents per day if a car was detained more than 30 days. From July, 1906, to July, 1907, the charge was 25 cents, with a penalty of 75 cents per day on cars held more than 30 days. From July, 1907, to March, 1908, the rate was 50 cents per day; from March, 1908, to March, 1910, 25 cents; from March, 1910, to August 1, 1910, 30 cents; from August 1, 1910, to January 1, 1913, 35 cents; from January 1, 1913, to January 1, 1917, 45 cents; from January 1, 1917, to March 31, 1917, 75 cents; and from March 31, 1917, to date, 60 cents.

It is noted from the foregoing statement that per diem charges vary from time to time to much greater degree than mileage rates. Various attempts have been made on the part of railroads to change the basis of compensation for private cars to per diem. Mr. J. W. Midgley, a well-known traffic expert, gave considerable study to this question and endeavored by publicity and his influence with the railroads to have the practice changed. His efforts were unsuccessful apparently for the reason that a per diem rate did not appeal to the private car owner, because he believed he could secure a faster movement of his cars and a more prompt return under the mileage basis than under the per diem.

During recent Interstate Commerce Commission hearings, when the car owners were asking for an increase in the mileage rates, they said they would be content to receive a per diem provided it were sufficiently large to cover their expenses of operation, depreciation, and a reasonable return on the investment. The question as to what the railroads' payment for the operation of private cars should

be is a much mooted one, the private car owner claiming that payment should cover all his costs of operation and maintenance, also general expenses, depreciation, and a return on the entire capital investment in car equipment. The railroad, on the other hand, insists that it should be required to pay only an amount that would cover maintenance and depreciation, and in some instances, railroad officials go so far as to maintain that they should be responsible for a payment sufficient only to cover expenses of maintenance. The argument presented by some railroad officials is that the shipper owning a special car receives a particular advantage from such ownership over the shipper not having the special equipment. Some go so far as to maintain that in effect an intangible part of the packing plant which is vested in the refrigerator car is turned over to the carrier for operation. Practically all carriers feel their obligation to pay a return sufficient to cover operating expenses on packer cars but object to supporting and maintaining, by providing an adequate return on the investment, the special advantage which accrues to the packer through his ownership of the private car.

Loaded and empty mileage.—While mileage is paid by the railroads both for loaded and empty movements, it is understood by the railroad and the shipper or car owner that the loaded and empty mileage on each railroad shall be equalized. In other words, the shipper is required to give each carrier over which his cars travel, a loaded mile for each empty mile the cars make, under penalty of paying to the railroad a mileage rate for each empty mile that is made in excess of the loaded mileage on the respective road. The rates levied by the railroads for excess empty mileage vary from 4 to 10 cents per mile. It is a question whether this arrangement, requiring an equalization of mileage, is adhered to. Very few railroads at the present time report loaded and empty mileage. The general practice is for the railroads to notify the shipper whenever his empty mileage is exceeding the loaded. He is then given an opportunity for equalization by furnishing the road a greater amount of loaded mileage.

COMMISSIONS.

Railroads formerly made a common practice of paying a commission on the freight revenue to the owners of private cars. This commission varied anywhere from 5 to 12½ per cent and in cases where a portion of the commission was in turn paid to the shipper was in the nature of a direct rebate. Private car companies competing for the fruit and vegetable traffic, both packer and railroad owned, waged a severe war of competition among themselves, and sometimes performed the service of transportation for practically nothing. The Elkins Act in 1903 and the growing practice about that time on the part of the private car companies in securing exclusive contracts with particular railroads, which completely did away with competition on a particular route, brought about the discontinuance of the practice. Some cases, however, were continued as late as 1906 when they were prohibited by court order.[1] There is no evidence that such commissions are anywhere continued to-day and it

[1] For disposition of the Milwaukee Refrigerator Transit & Car Co. case, involving the payment of commissions to a car line, which had complete control, for transportation purposes, over the product carried in its cars and was at least a "party interested in the traffic," see 142 Fed. Rep., 247; 145 Fed. Rep., 1007 I. C. C. Report, 1906, pp. 47, 48.

is altogether probable that they were permanently abandoned the beginning of the twentieth century.

REFRIGERATION AND ICING.

A considerable proportion of perishable traffic is refrigerated and iced at packer owned and controlled icing stations or platforms. As will be shown in Part II, chapter 4, of this report the packers own the icing stations in trunk line territory on the lines over which a large part of their tonnage moves.[1] The rate for icing fresh meat and packing-house products throughout the United States has been generally $2.50 per ton and sometimes an additional charge of 40 to 50 cents per hundredweight for salt.[2] On fruits and vegetables, on the other hand, the rates have been from $2.50 per ton up. Profits from furnishing ice for competitors has enabled the packers to ice their own shipments at a very low cost—in some cases almost negligible—a condition of particular advantage to them. Prior to 1906, when the Hepburn Act brought refrigeration rates under review by the Interstate Commerce Commission, the rates particularly on fruits and vegetables were "all the traffic would bear." They were based on no principles of rate making—the rate being raised arbitrarily by the packers and others interested in this business. This applies particularly to the stated refrigeration charges which are discussed in detail in Part III, chapter 4, of this report.

CAR SERVICE.

Cars of the Big Five packers, as shown by tables in Part II, chapter 2, make a larger daily mileage than the cars of any other class of companies. This may be due in part to the fact that their cars move for the most part from Missouri River points and Chicago to the East in trainload lots and when so moved the cars are not delayed at junction points or classification yards. The empties are returned in the same way. This trainload movement of loaded cars east and empty cars west has been aptly termed the shuttle movement and typifies the expedition accorded to packers' cars.

Moreover, because of their great tonnage and gigantic business operations the packers are enabled to employ traffic experts and other trained employees whose sole business is to trace cars. Junction reports are received from railroads and in addition employees are stationed at various points along the trunk lines to the east to keep the cars moving. The small packer can not afford to employ such methods nor does he control sufficient traffic to cause concern in railroad organization by threats of diverting his freight to some other road.

Packers' cars for the most part are returned empty. A packer witness at the Interstate Commerce Commission hearing in Chicago, February, 1918, said that as much as 15 per cent of the return mileage of packer cars was loaded. No figures could be secured to substantiate this statement, and while it is possible that packer cars are

[1] On July 31, 1918, the Interstate Commerce Commission decreed that the carriers should own and operate all icing stations and perform the service of refrigeration in transit. The packers are disposing of their icing stations by sale to the carriers on whose lines they are situated. See 50 I. C. C., 552.

[2] Refrigeration rates and charges for icing fresh meats and packing house products, also other perishable products such as fruits and vegetables, are under revision upward by proposed tariff issued under the auspices of the Railroad Administration, January, 1919.

sometimes used by the railroads for loading package freight on the return movement, this is not made use of to any great extent. Refrigerator cars of course are not adapted for carrying all kinds of freight, both because of the possible injury to the car and also because of the possible damage to the freight itself. Railroad tariffs frequently publish statements similar to the following and sometimes list specific articles barred from return loading:

Articles not to be loaded in standard refrigerator cars, meat cars, or standard ventilator cars: Any freight liable to damage from dampness or rust; and freight the odor of which may unfit the cars for transportation of perishable freight; and any rough or heavy freight that may damage car walls or floors.

Car cleaning, after a car has been used for freight other than that for which it is intended, is a considerable item of expense. The small independent packer not being able to follow his cars so closely as one of the Big Five, and therefore not able to secure prompt return movement, is often required to pay anywhere from $15 to $75 per car for cleaning. In addition his cars are very frequently subjected to diversion and, upon complaint, no relief is granted by the railroads. The following exhibit shows the difficulties that must often be met by the independent packer. The exhibit was presented by a representative of Jacob E. Decker & Sons, Iowa packer, to the Interstate Commerce Commission at its 1918 hearing in Chicago and shows the diversion suffered on six leased cars and the consequent loss by reason of excess of rentals paid over mileage received:

Shipped.	Days held.	Rental per car.	Earnings.
June 27, 1917	177	$116.46	$16.56
July 19, 1917	149	98.04	39.17
Sept. 12, 1917	68	44.94	14.06
Sept. 16, 1917	106	69.75	37.55
Sept. 19, 1917	101	66.45	51.56
Sept. 21, 1917	111	73.04	36.04
Total		468.68	194.94

It will be noted from the figures that the first car was not returned to the packing plant for almost six months and that the average diversion was for a period of four months. Besides the fact that the packer was deprived of the use of these cars during a period of extraordinary car shortage and congestion, he was required to pay rental for the cars even though they were not in his service. It might be thought that the delay in returning the cars at this particular time was due to the fact that they were tied up in congested terminals. Such was not the case, however, as testified by a representative of this packer when he showed conclusively that the cars were in general use by the carriers themselves.

Another case in point affected an independent packing company in Chicago. This company leased some cars from an independent car company and was paying a rental of $1 per day. One of these cars will suffice for example. This car was sent from Chicago to New Orleans loaded with fresh meat. The particular railroad was given the business in competition with others because it specifically agreed to make immediate return of the car to the shipper. The car, however, was diverted by the railroad and was out of the shipper's service for a

period of 63 days. During most of that time the car was used in local and switching service about St. Louis. Consequently the mileage earnings were very small. The shipper suffered not only the inconvenience of being without the use of his car but also a financial loss as well, for he had to pay the $1 per day rental on the car throughout the entire time.

Another example of car diversion is contained in the experience of an independent packing company at Birmingham, Ala. This company leased 10 cars from the Missouri River Despatch. An exhibit filed by the president of the company with the Interstate Commerce Commission at its hearing in Chicago shows that these cars required six weeks for a trip to New York and return, and recently as much as three months. Although the cars are stenciled with the name of the company and are supposed to be returned to the packing plant with due expedition, yet in several instances cited by him the cars were used by the railroads and loaded to Birmingham. Upon arrival there, instead of being turned over to the packing company they were reloaded by the railroad and sent to New Orleans. When forced to secure cars from the railroads because of inability to lease cars from private car companies, this packing company had to go to the expense of equipping such cars with racks and beef rails, which cost a minimum of $16 per car, with an additional outlay of about $15 per car for beef hooks considering that cars are seldom returned and hooks are frequently lost (see p. 84). This is a considerable expense in competitive selling.

These examples are not by any means isolated instances of difficulties met by the independent packer.[1] Every small packer in the United States is practically restricted from shipping his products any distance because of the difficulty in securing cars that are adapted for carrying fresh meats, and, if secured, he can feel sure of being able to make on the average not more than three or four shipments a year. The following exchange of letters between A. R. Fay, vice president of the Swift Refrigerator Transportation Co., and J. E. Dalrymple, vice president of the Grand Trunk Railway system, is an example of the careful consideration given by a railroad to a big packer's remonstrance on the subject of the misuse of refrigerator cars:

FEBRUARY 5, 1917.

Mr. J. E. DALRYMPLE,
Vice President, Grand Trunk Railway System,
Montreal, Quebec.

DEAR DAL.: I was going to talk to you about the matter I wired you on, but not being able to get to Montreal, I inclose herewith a report of the misuse of three of our cars—7304, 20278, and 12880.

You will note what they did with them at Toronto, let Davies load all of them; and we are so desperately short of cars we cannot possibly consent to this misuse of them.

Yours respectfully,

SWIFT & CO.

GRAND TRUNK RAILWAY SYSTEM,
New York, February 9, 1917.

Mr. A. R. FAY,
Care of Swift & Co., Chicago, Ill.

DEAR SIR: Misuse of Swift Refrigerator Transportation Co.'s cars. I have yours of the 5th, and in reply beg to state that we have no excuse to offer for the misuse of the

[1] Representative letters from independent packing companies to the commission showing car diversion, misuse of cars, and poor service in general are presented in the appendix as Exhibit 1.

equipment referred to. Same was positively in violation of instructions issued, and were it not for the difficulty in maintaining our organization by reason of shortage of labor, which is sufficiently serious to appertain to even one or two men, the parties responsible for the misuse in this case would have been discharged.

Our general superintendents have been told that a repetition will mean the removal of the employee responsible for the misuse, whoever it may be.

Yours truly,

J. E. DALRYMPLE,
Vice President.

Mr. Fay's letter of February 5 received immediate reply. The railroad not only accepted full responsibility and offered no excuse for the misuse of the cars, but also threatened with discharge the employees responsible. This prompt acknowledgment of the complaint and the measures taken to remedy it are in striking contrast to the consideration granted the pleas for better service from the small shipper. One of the principal factors in building up the control of the Big Five packers is the discrimination in car service granted them over that accorded the small packer.

During the stringent car shortage and congestion the latter part of 1917 and the beginning of 1918, when the Big Five packer cars were tied up in eastern terminals, the railroads were ordered to prorate their cars to shippers on request for equipment. At this time an official of one of the Big Five located at Chicago notified his company's packing plants situated west of the Mississippi River of the order and directed each plant to assign special employees to the task of securing the "lion share" of this outside equipment in order to conserve their own. Such an order is indicative of the efforts exerted by the Big Five to influence the railroads.

The Big Five packers have an added advantage which indicates the unity and cooperation under which they operate, so far as car service is concerned. They admit that their cars are pooled in that they lend them back and forth every day in the year when one or the other is in particular need of equipment. At the Interstate Commerce Commission hearing in Chicago, February, 1918, H. L. Osman, superintendent of the car department of Morris & Co., made the following statement:

> We will trade with them; yes, sir. For instance, if Armour or Swift are short of cars, we will help them out and trade back and forth in that way to help the game along. In the abstract you might say that the packers' refrigerators are pooled to a certain extent, because we are helping one another out right along in that way.[1]

Car service is one of the greatest competitive advantages the big packer is able to secure. While it is admitted that each shipper should be accorded the same expedited movement, that his cars should not be diverted, and that if loaded on the return haul the load should be such as not to damage the car, yet the evidence shows that the small packers suffer from all these abuses and their protests are often disregarded by the railroads. The railroads have every incentive to protect the big packer car whereas those of the small shipper are neglected.

PEDDLER CARS.

A very advantageous practice of the Big Five packers is the peddler-car service which is maintained from each packing center. A refrigerator car is loaded at the packing plant with all manner of packer

[1] I. C. C. Docket 4906, vol. 62, pp. 2429, 2430.

products from dressed beef to soap stock. Its products are discharged at each town designated in the route covered by the car, and the car moves on to the next place for delivery. The schedule of this service is regulated by agreement between the packer and the railroad, and some routes are covered by as many as three trips per week. This practice originated among the Big Five packers and has been used for the purpose of building up new markets. In recent years a similar service has been opened to independent shippers by a few railroads which have instituted a general service moving at specified times. The subject of car routes is treated in more detail in Part I, chapter 3, of the Commission's report on the Meat Packing Industry, and the operation of the peddler-car system is described more fully with respect to character of service, rates, and minimum weights in Part IV of that report.

DEMURRAGE.

The charge due the railroad by a shipper for failure to release, that is, load or unload a freight car within a stipulated free time, is known as a demurrage charge. Railroad tariffs publish car demurrage rules, which, since the Hepburn Act of 1906, are within the jurisdiction of and subject to review by the Interstate Commerce Commission. Formerly the charges varied widely in different parts of the country and unfair discriminations were common. Since 1906 greater uniformity in the rates has been secured and discriminatory rates abolished. The code of national car demurrage rules promulgated by the American Railroad Association in 1910 and approved by the Interstate Commerce Commission and National Association of Railroad Commissioners has still further unified the charges.

Private car owners have endeavored for years to have their cars, when standing on their private tracks, exempted from the demurrage charge, but their effort was unsuccessful until very recently. By its order in the matter of private cars (50 I. C. C., 652) the Interstate Commerce Commission now requires the carriers to maintain a rule in their tariffs to the effect that private cars shall not be subject to demurrage charges when on the tracks of the owners. Testimony in the record of this case indicates that in a few instances difficulty may arise in determining the identity of the car, but as a usual thing a shipper leasing a car will no doubt be considered the owner during the period of lease. Suggestion was made that the name of the shipper should be indicated by stencil marks on the car which should be conclusive evidence for the purpose of exemption.

Some private car owners testifying before the Interstate Commerce Commission in 1918 contended that they were entitled to a proportion of the demurrage collected from the lessees of their cars. They felt that cars leased by the trip, if unnecessarily delayed in their return from the lessee, might merit some consideration in this respect. On the whole, however, it appeared that cars are seldom used for storage purposes and the determination of the proportional demurrage due the car company would be difficult.

Contracts formerly existed between private car owners and railroads requiring the railroad company to remit one-half the demurrage collected. This practice was in effect an indirect rebate to the favored shipper in his competitive business. Such contracts were undoubtedly discontinued at the time the Hepburn Act became effective.

MASTER CAR BUILDERS' ASSOCIATION RULES.

Private car owners as well as railroads make up the membership of this association. Members are entitled to one vote for each 1,000 freight cars owned. An executive committee elected by the members controls the affairs of the association. This committee appoints various standing committees, chief among which is the arbitration committee, whose function is to arbitrate and adjust complaints and disputes arising under the rules. The chief purposes of the organization may be summarized as follows:

1. To increase the knowledge of its members on the subject of freight-car construction and maintenance.
2. To promote uniformity in practice relative to freight-car construction and interchangeability of equipment.
3. To promote improvement in freight-car construction with particular reference to matters of safety appliances and rules.
4. To develop and enact uniform rules for the adjustment of differences in freight-car maintenance and interchange existing among a great number of railroads of the United States and members of the association.

The first book of interchange rules was adopted and circulated in 1887. Periodically when material changes in the rules are made, or as occasion requires, the code of rules is amended and revised. Provisions in the rules cover the interchange of cars, care of foreign freight cars, and specifications regarding car construction and parts. They cover in detail every phase of construction and repairs together with prices and practice in rendering bills.

The master car builders' rules are not filed with the Interstate Commerce Commission nor are they published in tariffs of the carriers. A few owners of private cars desire that carriers be required by that commission to publish the rules in their tariffs. Two obstacles would be met in this practice: First, the difficulty in revising rules if they were published in tariffs, and, secondly, the question of jurisdiction of the Interstate Commerce Commission.

The Big Five packers and many other private car owners maintain their own car construction and repair shops. All major repairs are made at these shops and the railroads are instructed to return cars to the owner's home tracks for all repairs, except so-called "running repairs," which are made by the railroad. The private car company making at its own shops repairs for which the railroad is responsible, bills the railroad at Master Car Builders' prices. This privilege of making repairs is a great advantage to some private car owners, particularly the packers, for their expenses of repairs are less than the Master Car Builders' prices, according to testimony of their representatives at the Interstate Commerce Commission hearing in 1918.

Responsibility for repairs is covered by the preface to the code of rules as follows:

> These rules make car owners responsible for, and therefore chargeable with, the repairs to their cars necessitated by ordinary wear and tear in fair service, so that defect cards will not be required for any defects thus arising.
>
> Railroad companies handling cars are responsible for damage done to any car by unfair usage, derailment, or accident, and for improper repairs made by them, and they must make proper repairs at their own expense, or issue defect card covering all such damage or improper repairs.

Repairs for railroads on their own equipment are often made by private car companies and in some instances railroad cars are turned over to private car companies for rebuilding.

Until recently there was considerable complaint from private car owners that they were being billed by railroads for repairs that had never been made. Excessive repair charges may perhaps be equalized between railroads, because of the reciprocal obligations to care for each other's cars. The private car owner, however, has no such self-adjusted redress. Among the instances of overcharge for repairs that have come to the attention of the Federal Trade Commission are several cases affecting the Big Five packers. The major complaint of private car owners, however, is directed to the delay in the presentation of repair bills. A bill is often rendered months, and in some instances almost a year after the repair has been made. Limitation of a year has been fixed, after which repair bills lapse and are ineffective. It is seen from these practices that there can be no effective check on repairs by the car owner, and that repairs may be made by the railroads and the bills never rendered.

Private car owners are subject to the rules of this association. A recent requirement which has caused considerable comment and controversy, especially among the packers, is that found in rule No. 3, paragraph (*g*), concerning the stenciling of cars showing the date of construction. This order was originally intended to become effective July 1, 1916, but its enforcement has twice been postponed, first to March 1, 1918, and later to October 1, 1919. The rule reads in part as follows:

> After October 1, 1919, cars will not be accepted in interchange, unless stenciled showing month and year built, or bearing a badge plate giving this information. Cars built prior to 1895 may be stenciled "Built prior to 1895."

The packers have never favored the stenciling of this information on their cars, and have had considerable correspondence among themselves concerning compliance with the order. It is not known whether the Big Five packers have been instrumental in securing the postponement of this order.

At the Interstate Commerce Commission hearing in Chicago in February, 1918, the owners of private cars directed the following complaints against Master Car Builders' practices:

1. That bills for repairs were not rendered promptly.
2. That the carrier statement of repairs was final, and no amount of evidence by the car owner, even proving improper repairs or proving that repairs not made had been charged, was effective to counteract it.
3. That cards describing repairs were no longer attached to cars when returned to the owner.
4. That private car owners were not represented on any committee but the price committee of the Master Car Builders' Association, and consequently had no voice in the disposition of any matter directly affecting them.

A representative of the Master Car Builders' Association at this hearing stated that there was no apparent reason why the reforms contained in the foregoing complaints should not be made, and it is reported that the conditions to which all four complaints were directed have been improved to the entire satisfaction of the parties concerned.

MIXING RULES.

The explanation for mixing rules is twofold: They were devised either to permit the combination of various and different articles to make up and reduce the car load minimum or to permit the mixed shipment of various and unrelated articles manufactured by a particular industry or group of shippers. In either case the result is the same; it benefits the particular industry or shipper that has the articles to ship and operates adversely to the producer of the separate individual articles permitted by the mixing rules and exceptions thereto.

These rules vary considerably in different sections of the country. Then, too, in the same section a plainly stated rule may be so modified by exceptions as to be interpreted only by its framers. For instance, in official classification territory the general mixing rule is known as rule 10. This is modified by three separate exceptions, applicable solely to articles shipped by the packer.[1] Under these exceptions various combinations of fresh meats and packing-house products may be made so that different rates per article or per car are possible. These exceptions permit the mixing not only of meats, the direct product of the packing industry, but also many by-products thereof, and unrelated articles, such as poultry, cheese, groceries, and even stationery, advertising matter, butchers' coats and aprons. These articles may be mixed with the packing products on an any-quantity basis and receive the benefit of expedited movement in less than carload quantities. Not only are these rules so devised as to favor the particular industry which is sufficiently integrated to take full advantage of their many provisions, but they are so devised as to countenance "place discrimination." Competitive business is materially restricted to this extent.

The mixing rules are, of course, a part of the tariffs and as such are open to all shippers on the same basis, but they are unquestionably discriminatory in favor of the big packers in that they are the only producers who have the variety of products to ship. They can take advantage of the privilege, whereas the small producers, who do not have the variety, can not do so. This point was aptly stated by George Merki, chief inspector, General Freight Association Inspection and Weighing, in his testimony before the Interstate Commerce Commission in the hearing held at Chicago, February, 1918. In answer to a question as to whether there was discrimination between packers, Mr. Merki said:

> None that I can see, unless he is a little fellow on the fringe of the yard who may not have something he can put in there; he may not have any soap he can put in his car; his car may have nothing but cured meats.[2]

The rules do operate in favor of the large producer of the various articles capable of mixture under the rules in that he is able to ship small quantities of a great variety of products in mixed car loads at low-class rates, whereas a small shipper who desires to ship the same amount of any given product, but has not the various articles to make up a mixed car load, must make his shipment at the established-class rates. Mr. Merki presented some very interesting exhibits contrasting mixing under rule 10 of the official classification

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[1] For exceptions to rule 10, see Morris, I. C. C. 736. For illustrations of mixing under exceptions to rule 10, see I. & S., 693.

[2] I. C. C. Docket 4906, vol. 63, p. 4405.

tariff and under the exceptions to that rule. These exhibits are produced herewith:

EXHIBIT 1.

COMPARISON BETWEEN CHARGES ON SHIPMENT UNDER ITEM 2455 OF RULES GOVERNING TRANSPORTATION OF PACKING-HOUSE PRODUCTS AND RULE 10 OF OFFICIAL CLASSIFICATION.

Car 8702 M. R. L., Chicago to Allegheny, Pa., November 7, 1917.

(*a*) Charged as per item 2455-A, Supplement II to Freight Tariff 130-I, I. C. C. 632, Eugene Morris, agent:

2 barrels smoked pork	546 pounds	fifth class.	
25 barrels pickled pork	8,137 pounds		
	8,683	pounds at 21.5 cents (fifth class)	$18.67
60 barrels fresh beef chuck meat, salted	23,045	pounds at 31 cents	71.44
	31,728	pounds	90.11

(*b*) The shipment used in (*a*) would, under rule 10 of Official Classification No. 44, I. C. C., O. C. 44, R. N. Collyer, agent, be charged as follows:

2 barrels smoked pork	546	pounds (L. C. L., R. 26, C. L. 5, min. 30,000).	
25 barrels pickled pork	8,137	pounds (L. C. L., R. 26, C. L. 5, min. 30,000).	
60 barrels fresh beef chuck, meat, salted	23,045	(L. C. L., R. 26 plus 5 cents per hundredweight, C. L. 4, min. 30,000).	
	31,728	pounds at fourth class, 31	$98.36

Charges as per rule 10		98.36
Charges as per item 2455		90.11
Charges as per rule 10	higher	8.25

The charge for the foregoing shipment under rule 10 would be $98.36 per car. Under the exceptions to the rule, the charge is $90.11 per car, making a saving to the packer of $8.25 per car. The difference is because of the reason that under rule 10 the fourth-class rate would apply to the entire shipment whereas under the exception the fifth-class rate applies to about one-third of the shipment. In other words, the mixing permits a lower class rate to be applied.

EXHIBIT 2.

COMPARISON BETWEEN CHARGES ON SHIPMENT UNDER ITEM 2456 OF RULES GOVERNING TRANSPORTATION OF PACKING-HOUSE PRODUCTS AND UNDER RULE 10 OF OFFICIAL CLASSIFICATION.

Car 27002 F. G. E., Chicago, Ill., to Washington, D. C., January 28, 1918.

(*a*) Charged as per item 2456, Freight Tariff 130-J, I. C. C. 675, Eugene Morris, agent:

1 barrel salt pickled tripe	112	pounds.	
15 boxes peanut butter	270	pounds.	
13 crates fruit jelly	988	pounds.	
22 boxes chili con carne	686	pounds.	
200 boxes pork and beans	20,800	pounds.	
14 boxes canned meats	278	pounds.	
55 boxes preserved cherries	3,080	pounds.	
1 keg preserved cherries	67	pounds.	
13 boxes mince meat	633	pounds.	
192 boxes toilet soap	4,160	pounds.	
Dunnage	225	pounds.	
	31,299	pounds at fifth class, 33 cents	$103.29
2 boxes beef extract, in glass	60	pounds.	
5 boxes fruit sirup, in glass	370	pounds.	
	430	pounds at first class, 87 cents	3.74
	31,729	pounds	107.03

(*b*) The shipment used in (*a*) would, under rule 10 of Official Classification No. 44, I. C. C., O. C. 44, R. N. Collyer, agent, be charged as follows:

1 barrel salt pickled tripe	112	pounds (L. C. L. R. 26, C. L. 5, min. 30,000).	
15 boxes peanut butter	270	pounds (L. C. L. 2, C. L. 5, min. 36,000).	
13 crates fruit jelly	988	pounds (L. C. L. 3, C. L. 5, min. 36,000).	
22 boxes chili con carne	686	pounds (L. C. L. R. 26, C. L. 5, min. 36,000).	
200 boxes pork and beans	20,800	pounds (L. C. L. R. 26, C. L. 5, min. 36,000).	
14 boxes canned meats	278	pounds (L. C. L., R. 26, C. L. 5, min. 30,000).	
55 boxes preserved cherries	3,080	pounds (L. C. L., 1, C. L. 5, min. 36,000).	
1 keg preserved cherries	67	pounds (L. C. L. 3, C. L. 5, min. 36,000).	
13 boxes mince meat	633	pounds (L. C. L. 3, C. L. 5, min. 36,000).	
192 boxes toilet soap	4,160	pounds (L. C. L., R. 28, C. L. 5, min. 36,000).	
Dunnage	225	pounds.	
	31,299	pounds C. L. min. 36,000 at fifth class, 33 cents	$118.80
2 boxes beef extract, in glass	60	pounds (L. C. L. 1, C. L. 3, min. 30,000).	
5 boxes fruit syrup, in glass	370	pounds (L. C. L. 1, C. L. 3, min. 30,000).	
	430	pounds at first class, 87 cents	3.74
	31,729	pounds	122.54

Charges as per rule 10	122.54
Charges as per item 2456	107.03
Charges as per rule 10 ... higher	15.51

The difference between mixing under rule 10 and under the exceptions in this instance means a saving to the packer of $15.51 per car. This combination operates to lower the carload minimum and also the charge under the exception in the case.

Exhibit 3.

COMPARISON BETWEEN CHARGES ON SHIPMENT UNDER ITEM 2457 OF RULES GOVERNING TRANSPORTATION OF PACKING-HOUSE PRODUCTS AND RULE 10 OF OFFICIAL CLASSIFICATION.

Car 16706 S. R. L., Chicago to Washington, D. C., January 31, 1918.
(*a*) Charged as per item 2457, Freight Tariff 130–J, I. C. C. 675, Eugene Morris, agent:

88 quarters fresh beef	11,381	pounds.	
51 dressed sheep	2,129	pounds.	
5 boxes fresh beef tongues	612	pounds.	
	14,122	pounds at dressed beef rate, 44.5 cents	$62.84
1 barrel pickled meats	335	pounds at fifth class, 33 cents	1.11
250 cases butterine	9,750	pounds at second class, 76 cents	74.10
	24,207	pounds	138.05

(*b*) The shipment used in (*a*) would under rule 10 of Official Classification No. 44, I. C. C., O. C. 44, R. N. Collyer, agent, be charged as follows:

88 quarters fresh beef	11,381 pounds (L. C. L. 1, C. L. D. B. min. 21,000).	
51 dressed sheep	2,129 pounds (L. C. L. 1, C. L. D. B. min. 21,000).	
5 boxes fresh beef tongues	612 pounds (L. C. L. 1, C. L. D. B. min. 21,000).	
1 barrel pickled meats	335 pounds (L. C. L., R. 26, C. L. 5, min. 30,000) Rule 10C.	
	14,457 pounds, minimum 21,000 pounds at dressed beef rate, 44.5 cents	$93.45
250 cases butterine	9,750 pounds second class (any quantity) 76 cents	74.10
	24,207 pounds	167.55

Charges as per rule 10	167.55
Charges as per item 2457	138.05
Charges as per rule 10 higher	29.50

Under this exception the saving is considerable, amounting in this particular instance to $29.50 per car. Here again, the exception lowers the minimum weight under the rule and instead of being charged for the 21,000 pounds minimum for dressed beef, the charge under the exception is based on the actual weight of the dressed beef shipped.

EXHIBIT 3-A.

COMPARISON BETWEEN CHARGES ON SHIPMENT UNDER ITEM 2457 OF RULES GOVERNING TRANSPORTATION OF PACKING-HOUSE PRODUCTS AND RULE 10 OF OFFICIAL CLASSIFICATION.

Car 8619, M. R. L. X., Chicago to Washington, D. C., January 28, 1918:

(*a*) Charged as per item 2457, Freight Tariff 130-J, I. C. C. 675, Eugene Morris, agent:

2 barrels fresh pork	405 pounds.		
40 boxes fresh meats	4,320 pounds.		
25 barrels livers	5,122 pounds.		
17 barrels fresh pork	4,751 pounds.		
50 boxes pork sausage	1,500 pounds.		
		16,098 pounds at 44.5 c	$71.64
1 bundle cotton frocks	115 pounds.		
66 boxes dressed poultry	6,358 pounds.		
		6,473 pounds at 87 c	56.32
1 box paper tags and wire tag fasteners	60 pounds.		
100 boxes cheese	4,067 pounds.		
		4,127 pounds at 57 c	23.52
20 barrels fresh chuck meat salted		7,360 pounds at 39 c	28.70
15 boxes and baskets smoked soserol (sausage substitute)	853 pounds.		
1 barrel lard oil	445 pounds.		
1 box lard oil	47 pounds.		
1 box neat's-foot oil	40 pounds.		
		1,385 pounds at 33 c	4.57
		35,443 pounds	184.75

(*b*) The shipment used in (*a*) would, under rule 10 of Official Classification No. 44, I. C. C. 44, R. N. Collyer, agent, be charged as follows:

2 barrels fresh pork		405 pounds	(L. C. L. 1, C. L. D. B. min. 21,000).	
40 boxes fresh meat		4,320 pounds	(L. C. L. 1, C. L. D. B. min. 21,000).	
25 barrels livers		5,122 pounds	(L. C. L. 1, C. L. D. B. min. 21,000).	
17 barrels fresh pork		4,751 pounds	(L. C. L. 1, C. L. D. B. min. 21,000).	
50 boxes pork sausage		1,500 pounds	(L. C. L. 1, C. L. D. B. min. 21,000).	
20 barrels fresh beef chuck meat, salted.		7,360 pounds	(L. C. L. R. 26 plus 5 c., C. L. 4, min. 30,000).	
1 barrel lard oil	445 pounds..		(L. C. L. 3, C. L. 5, min. 30,000).	
1 box lard oil	47 pounds..		(L. C. L. 2, C. L. 5, min. 30,000).	
1 box neat's-foot oil.	40 pounds..		(L. C. L. 2, C. L. 5, min. 30,000).	
15 boxes and baskets smoked sausage.	853 pounds..		(L. C. L. 3, C. L. 5, min. 30,000).	
		1,385 pounds.		
		24,843 pounds at dressed beef rate, 44.5 c.		$110.55
1 box cotton frocks	115 pounds..		(First class, any quantity).	
66 boxes dressed poultry.	6,358 pounds..		(First class, any quantity).	
		6,473 pounds at first-class rate, 87 c.		56.32
1 box paper tags and wire fasteners.	60 pounds..		(Rule 15D) (third class, any quantity).	
100 boxes cheese..	4,067 pounds..		(Third class, any quantity).	
		4,127 pounds at third-class rate, 57 c.		23.52
		35,443 pounds.		190.39

Charges under rule 10	190.39
Charges under item 2457	184.75
Charges under rule 10 ....higher..	5.64

This exhibit is an illustration of the same exception as the one contained in the preceding Exhibit 3. It will be noted that even though the shipment contained absolutely no dressed beef, yet the charge under the exception was $5.64 less than under rule 10. This shipment, too, is a fair sample of the sort of combination that is capable of being mixed by the packer in one carload. It illustrates also the kind of inspection necessary and proper to check up the basis for the charges levied.

Exhibit 4.

COMPARISON BETWEEN CHARGES ON SHIPMENT UNDER ITEM 2460, SEC. 2, OF RULES GOVERNING TRANSPORTATION OF PACKING-HOUSE PRODUCTS AND RULE 10 OF OFFICIAL CLASSIFICATION.

Car 1985 W. C. L., Chicago to Philadelphia, Pa., January 30, 1918:

(*a*) Charged as per item 2460, section 2, of rules governing transportation of packing-house products, Freight Tariff 130-J, I. C. C. 675, Eugene Morris, agent:

76 quarters fresh beef	8,787 pounds.	
297 dressed sheep	11,725 pounds.	
1 barrel fresh beef	385 pounds.	
3 barrels fresh pork	1,081 pounds.	
20 crates fresh pork	627 pounds.	
32 crates fresh pork	1,803 pounds.	
	24,408 pounds at 45.5 c.	$111.06
2 boxes stationery	385 pounds at 88 c.	3.39
	24,793 pounds	114 45

(*b*) The shipment used in (*a*) would, under rule 10 of Official Classification No. 44, I. C. C., O. C. 44, R. N. Collyer, agent, be charged thus:

76 quarters fresh beef	8,787 pounds.	(L. C. L. 1, C. L. 45.5, min. 21,000).	
297 dressed sheep	11,725 pounds.		
1 barrel fresh beef	385 pounds.		
3 barrels fresh pork	1,081 pounds.		
20 crates fresh pork	627 pounds.		
32 crates fresh pork	1,803 pounds.		
	24,408 pounds	at dressed beef rate, 45.5 c.	$111.06
2 boxes stationery	385 pounds	at (first class, any quantity), 88 c.	3.39
	24,793 pounds		114.45
Charges under rule 10			114.45
Charges under item 2460			114.45

This exhibit illustrates one instance in which the charges under the exception and under rule 10 are exactly the same. This is due in this particular instance to the fact that the shipment is composed largely of fresh meats that are grouped in the same class, also the fact that the tonnage fulfills the requirement under the minimum required for beef. It permits, however, the mixing of a first-class article on an "any quantity" basis.

It was said by Mr. Merki that the exceptions to the rule were presumably made to increase loading. He declared also that mixing rules operated in favor of the shipper of packing-house products. In fact, the testimony gave evidence that the witness seemed to believe that the mixing rules were devised for the packers' benefit. In reality, as will be noted from the exhibits, they are given special mixing privileges and in a number of instances obtain lower rates.

There is nothing injurious in the mixing rule in itself. The injury lies in its exceptions enjoyed by the packers, particularly the Big Five packers as a special class, and also to the lack of effective supervision and the difficulties attendant upon it. Other discriminations resulting from mixing privileges against shippers of commodities similar to those of the packers are as follows:

1. They give expedited service to groceries, cheese, lard, glue, soap, soap powder, and other products, and in times of embargoes against such articles enable the packer to get his shipments through to market. This situation is explained in Part II, chapter 6, of this report.

2. Beef refrigerator cars may be used for large quantities of fifth-class freight that can just as well be shipped in ordinary box cars, or at best, ventilator refrigerator cars. This practice amounts to a wasteful use of specialized equipment. The cars belong to the shippers, however, and they may do with them what they please.

3. The exceptions to the rule itself permit combinations to lower the minimum weight, a result which enables the packer to ship any combination of articles and in exactly the amount required to one place, which in many instances is a branch house. This means that more cars will be required to ship the same tonnage; the railroads will receive correspondingly less revenue, and the packers will receive a greater revenue from mileage.

In connection with the mixing rules should be discussed also the rule regarding the return of containers. Until recently the rule was that containers should be returned free. They are at present, however, classified as fourth class.[1] This affects small dairy shippers disadvantageously. It does not affect the larger shipper who ships

[1] See 2035, Morris, I. C. C., 736.

entirely in carload lots. An example may be found in the shipment of poultry. The big packers ship most of their poultry in carload lots from concentration points, whereas the shipments of the small dealer are usually less than carloads, oftentimes through to destination.

Prior to 1902, the commodities and classification of articles included in the exceptions to the rule were considered as a part of the general rule. The rule committee decided to drop them from the tariff. Certain packers at the time prevailed upon a few carriers to continue them as exceptions to the general rule and other carriers fell into line, so that at present each freight territory in the country has its peculiar mixing rule with exceptions similar to that explained for official classification territory. The question of mixing rules is now under consideration by the Interstate Commerce Commission.

Minimum weights.—The packers and some private car lines have endeavored to keep the minimum carload as low as possible. A low mimimum is advantageous to the shipper, particularly the packer owning his own cars, for two reasons: In the first place he is able to ship to his branch house or to any market exactly the articles required and in the amount needed; secondly, in times of car surplus he can divide his shipments among all the cars available and receive a greater mileage return from the railroads by the operation of all the cars than if only the few needed were operated. The railroads, on the other hand, have fought for a higher minimum carload. This attempt at increasing car efficiency, coupled with the fact that the size and capacity of the cars have increased in recent years, has brought about an increase in the minimum weight.

The subjects of minimum weights and mixing rules are inextricably bound together. The minimum weight for dressed beef which may be loaded in a car is 21,000 pounds. The limit of weight, on the other hand, is restricted only to the weight the car will carry and the amount of beef that can be loaded and properly refrigerated. Perishable articles are not, and should not be loaded beyond the point wherein they can be properly refrigerated. If the car is overloaded, the circulation of air may be impeded.

On a shipment of packing-house products from Chicago to New York, the rate per hundredweight is 55 cents.

The charge, therefore, at the minimum of 21,000 pounds is $115.50 per car. The tariff, on the other hand, provides that only 3,000 pounds of fresh beef need be loaded and the remainder of the shipment may be made up according to the exceptions to the mixing rule by any and all packing-house articles which may take the fifth-class rate. The minimum in such a shipment is not prescribed in pounds, but depends upon the amount of revenue that the car should yield, which in this case is $115.50. The fifth-class rate from Chicago to New York is 36 cents per hundredweight and the prescribed minimum under the fifth class is 30,000 to 36,000 pounds, depending upon the article shipped. If soap alone were sent from Chicago to New York, for instance, the charge for a minimum carload would be $129.60, for the minimum in the case of soap is 36,000 pounds. This would apply to all other fifth-class articles which take a 36,000-pound minimum, such as canned fruits and vegetables, cleansing powders, and so on. In mixed carloads, therefore, it does not matter how much of any one article is loaded, provided only, first, there is at least

3,000 pounds of fresh meat, and, second, the total freight revenue is not less than $115.50.

The following hypothetical car load will illustrate the practice in this respect:[1]

Fresh beef, 3,000 pounds, at 55 cents	$16.50
Lard, 5,000 pounds, at 36 cents	18.00
Canned meats, 4,000 pounds, at 36 cents	14.40
Cured meat, 5,000 pounds, at 36 cents	18.00
Soap, 3,000 pounds, at 36 cents	10.80
Canned fruits and vegetables, 3,500 pounds, at 36 cents	12.60
Glue, 3,000 pounds, at 36 cents	10.80
Cleansing powder, 4,000 pounds, at 36 cents	14.40
Total, 30,500 pounds	115.50

About one-half the articles mentioned in the foregoing mixture would require a minimum of 36,000 pounds if shipped in car-load lots, while the other articles, with the exception of fresh beef, would need be loaded to a 30,000-pound minimum.

The minimum, as previously noted, has been increased considerably during recent years and was further increased during the winter of 1917 and 1918 to help in overcoming the unusual car shortage. The problem of minimum weights is so closely connected with that of mixing rules that it is altogether probable that the committee revising the mixing rules will also consider and make proper provisions for minimum weights.

This chapter on relations between the railroads and the packers, as well as other private car lines, briefly as the material is presented, shows that the questions involved have been constant sources of contention, each side endeavoring to secure the upper hand. The balance of power, however, has not been equal. The packers have been united by a common interest; the railroads have been divided by the individual desire of each to secure as large a proportion of the packers' traffic as possible.

[1] Articles named in this mixture are classified according to the following class, rate, and minimum:

Commodity.	Class.	Rate	Minimum.
		Cents.	*Pounds.*
Lard	5	36	30,000
Canned meats	5	36	30,000
Cured meats	5	36	30,000
Soap	5	36	36,000
Canned fruits and vegetables	5	36	36,000
Glue, dry or liquid	5	36	30,000
Cleansing powder	5	36	36,000

CHAPTER 4.

LEGAL STATUS OF PRIVATE CAR LINES.

A car not owned directly by a railroad company or carrier, is a simple definition of a private car. Such cars are defined by the American Railroad Association as "cars having other than railroad ownership." Companies owning private cars may be classified into three groups: (1) Shippers owning cars directly in connection with and incidental to their commercial activities, or indirectly through separately incorporated car companies; (2) independent car companies, who lease cars to railroads and shippers; (3) railroad-owned companies, or private-car companies whose stock is wholly railroad owned. Private cars under this classification first came into use about the year 1867, when industry required special types of equipment not provided by the railroads. It is commonly supposed that private cars are of recent origin, but they really date back to the very beginning of railroad operation in this country. When railroads were first chartered they were merely toll roads. The common theory was that the railroad should furnish the roadbed, rails, and motive power, while the vehicle should be furnished by the shipper.

This theory, namely, that the railroads should be required to haul the equipment offered them by the shipper, has persisted throughout the history of railroad operation in the United States. Various interpretations and modifications of this theory have been made by the courts from time to time in considering the questions which have come up in regard to railroad practices, and it is therefore deemed advisable to present a brief account of the historical background on which the various legal opinions affecting railroads have been based. The present chapter, therefore, covers first, the historical development of railroad-operated equipment; second, previous investigations of private cars; third, regulatory powers vested in the Interstate Commerce Commission by acts amendatory to its organic act; fourth, the ruling that private car companies are not common carriers; fifth, the duty of carriers to furnish equipment and to haul privately owned equipment.

HISTORICAL DEVELOPMENT OF RAILROAD-OPERATED EQUIPMENT.

From the standpoint of the private car and its relation to railroad owned and operated equipment, the railroad history of the United States may be divided into four epochs: First, the public-highway period, from 1830 to 1845; second, the period of railroad ownership of all equipment, from about 1845 to 1860; third, the period of fast-freight lines, 1860 to 1875; fourth, the period from about 1875 to the present, during which time has occurred the development of the private car company.

Public-highway period.—The so-called "public highway" theory of transportation was an outgrowth of the turnpike system of roads in common use at that time. These turnpikes were public highways owned by private companies. A toll charge was levied and the user was supposed to provide his own vehicle. With the coming in of railroads, the practice of levying tolls was continued. As already stated, charges were levied for the various services rendered. The railroad company provided the roadbed, the rails, and the motive power, and the shipper was supposed to furnish his own transportation equipment. As railroads became more numerous and their lines were extended they began building their own freight cars and other car equipment in increasingly large numbers. It was seen that the continued operation of the turnpike system as applied to railroad operation would prove impracticable. The railroads, therefore, proceeded to buy up the nondescript and heterogeneous cars commonly used at the time and the private car was dead for a period of about fifteen to twenty years.

Railroad ownership of equipment.—By 1845 the transition from the "public highway," or turnpike theory, to that of complete railroad ownership of equipment was practically complete. This period extended to about the time of the Civil War. Each railroad during this period developed individually its own principles of transportation. There were in existence no railroad systems as they are commonly known at the present time. Uniformity in equipment and operation was entirely lacking. The tracks of different railroads were often of different gauge, and, therefore, in order to "through-route" shipments, the articles would have to be transferred from one connecting line to the other. This delay and difficulty in the through shipment of freight brought about the organization of fast-freight lines.

Fast freight lines.—These lines were introduced and owned by independent companies. Cars operated by them were of special construction and equipped with movable trucks. The body of the car together with its contents, could therefore be transferred from the tracks of one railroad to another without unloading, as was previously required. In addition to the elimination of delays in the shipment of freight when carried over the lines of one or more railroads, the fast freight lines were also responsible for materially diminishing claims for loss and damage. A distinct advantage to the shipper was also secured, for he was able to ship his freight through to destination on one billing and thus secure from one company, the fast freight line, instead of from a number of separate railroads over which his goods might be carried, a guaranty of delivery and liability for loss or damage in transit.

The contracts between these companies and the railroads varied. The financial arrangements, however, were more or less uniform. In general two bases of compensation to the fast freight lines were in equal favor and practice. One method was for the fast freight line to collect the freight charges from the shipper and in turn pay the railroad an agreed amount for the handling of the cars; according to another method, the freight charges were collected by the railroad and the fast freight line was paid either a specified mileage rate for the distance each car traveled or a percentage commission of the freight collected, varying anywhere from 8 to 15 per cent. Business

for these companies increased, and before long the railroads themselves began gradually to secure an interest in such associations. It has been charged that some railroad officials formed freight associations in order to bleed the railroads of their legitimate earnings. Be that as it may, the railroads gradually became interested in the lines already established and began forming cooperative lines of their own. By 1875, therefore, private ownership and control of fast freight lines had disappeared, but the lines themselves had come to stay.

Development of private car companies.—The first experimentation with cars of special type, particularly the refrigerator car, began in the late sixties. Such cars, however, were not produced or used to any extent before 1880. From then on shippers requiring special transportation facilities have furnished their own cars because of the fact that the railroads did not see fit to provide the special type of car required. This movement was in some respects a revival of the early license during the highway period, although to-day the cars are required to be constructed according to uniform specifications. The packers and a few large shippers of fruits and vegetables were the first to secure cars in any quantity. When it was seen that the operation of private cars was exceedingly profitable, private companies were formed for the purpose of leasing or renting their equipment, not only to shippers, but also to railroads. These companies together with shippers owning cars, are not common carriers, and are therefore not subject to the jurisdiction of the Interstate Commerce Commission.

PREVIOUS INVESTIGATIONS OF PRIVATE CARS.

Various phases of the relations existing between railroads and private car companies have been investigated by the Interstate Commerce Commission and the results presented in the commission's annual reports for the years 1889, 1891, 1893, 1894, 1896, 1902, 1903, and 1904. Various phases of car operation affecting private car companies have also been investigated in recent years and made the subject for report from time to time.

The first investigation made by the Interstate Commerce Commission of matters affecting ownership of private cars was that in 1889 on the subject of car mileage. On the 8th of May in that year a hearing was held at Washington for the purpose of inquiring into the rates paid by railroads for the use of cars "belonging to other railroad companies or to private companies or individuals." Information had early been received by that commission that payment of car mileage for cars owned by private shippers had sometimes been used as a cover for discrimination in rates. The evidence submitted in the case, however, did not prove conclusively the payment of rebates to shippers or owners of private cars, but the report gives the impression that such payments were probably made. It also shows that profits to private car owners were very large. Sometimes a car would pay for itself in two or three years. A quotation from the report is as follows:

At a car mileage rate of 1 cent a mile the profit on the investment in many of these cars is very large, reaching, according to information acquired by the commission, 25 per cent, 50 per cent, and even more, annually. Sometimes a car will pay for itself in two or three years. Owners of several hundreds of such cars, therefore, receive a

very large amount of money from the railroads over which they are hauled, and it is easy to see how it is possible, out of the large returns from these cars, for owners to pay rebates to shippers, if so disposed. The evidence taken in the case did not prove the payment of rebates to shippers by owners of any of these cars, but it was quite clear that some of the officers of railroad companies who were examined had impressions that such might be the fact. It is also evident that the payment of either 1 cent or three-fourths of a cent a mile to a large shipper owning and controlling his own cars and furnishing business therefor constitutes a very profitable incident to his legitimate business, and is at least a material advantage to the man owning cars over the man who owns none.[1]

While at this time the Interstate Commerce Commission lacked final authority in fixing or initiating rates throughout the country, yet they recommended that a rate of three-quarters of a cent per mile should be adequate as a return for any private car. That the commission was concerned about the business of the private car lines and their relation to railroads is evidenced by the following statement:

It is an obvious deduction from all the facts that cars for the various kinds of business done by a carrier should be owned by the carrier itself and furnished to all alike, or, if owned by the shipper, only such reasonable allowance for their use should be made as to permit no advantage to the private owner of cars who is also a shipper, nor afford a margin for paying rebates to other shippers."[2]

Realizing also that mileage rates should be properly supervised by governmental authority the commission recommended to Congress in 1889 that the interstate commerce act should be so amended as to give the commission jurisdiction over mileage rates for the use of cars of private companies or individuals.[3]

The subject of private cars mentioned by the commission at various times in its annual reports during the nineties, was also considered in its report to Congress in the year 1902 under the discussion of per diem rates At this time the per diem rate for use in the interchange of railroad equipment was introduced and there was considerable discussion as to whether the per diem basis should be applied also to private cars. Private cars, however, were excepted and payment for their use under the mileage plan continued, probably for two reasons. In the first place, owners of private cars expected to be able to secure faster service under a mileage rate than under the per diem. In the second place, special agreements and contracts at this time existed between certain railroads and shippers whereby the shippers secured from the railroads in question a higher mileage rate than was usually granted. Some of these contracts had a period of years to run and consequently the favored shippers were loath to give them up.

Although the mileage rate at this time averaged only from three-fourths to 1 cent, yet the income on the investment in the car was so liberal that, according to the report of the commission for 1902—

the shipper who provides his own cars receives such large sums in mileage that the excess is substantially equivalent to a rebate on the transportation charges, and to that extent a discrimination against shippers of similar goods who do not furnish cars. Furthermore, shippers who send out many carloads from competitive points, like Kansas City and Chicago, are able to use, and by common report have used, their cars as a means of securing reductions in the transportation rate. A carrier refusing to pay the mileage which a shipper demands is threatened with the loss of the traffic; and in times of slack business the abuse has in many cases been aggravated by the sending out of cars loaded to much less than their full capacity, for the purpose of securing mileage on cars which would otherwise stand idle.[4]

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[1] I. C. C. Report 1889, p. 16.
[2] I. C. C. Report 1889, p. 18.
[3] I. C. C. Report 1889, p. 108.
[4] I. C. C. Report 1902, p. 81.

The commission also said in the same report:

The owners of these cars, collecting these enormous sums [$12,000,000 for the year ending June 30, 1901] and able to exert an influence on freight rates affecting many millions of dollars in transportation charges, are not common carriers and are not subject to the act to regulate commerce, and no public authority supervises their accounts. This is a matter of grave importance which may well engage the attention of the Congress.[1]

Hearings on the subject of private cars.—Hearings were held by the Interstate Commerce Commission directly touching the subject of private cars in the years 1904, 1913, and 1914. In the latter case final report was not made, for the investigation was interrupted in the fall of 1914 by court proceedings which ended with the case before the Supreme Court, known as the Ellis case, in which the contention of the private car owners that they were not common carriers was upheld. This investigation was reopened by the Interstate Commerce Commission in February, 1918, and testimony was taken throughout the month at hearings in Chicago and New York City. Hearing and argument was also held at Washington June 7 and 8 and decision was published by the Interstate Commerce Commission July 31, 1918.

In its report to Congress in 1904 the Interstate Commerce Commission set forth four disadvantages or evils attending the use of private cars as follows:

1. Concessions are made to particular shippers in refrigeration charges which amount to the payment of a rebate.
2. A practical monopoly has been created in the use of private cars for the movement of certain commodities, especially fruit, which has enormously increased to the public the cost of transportation.
3. When the owner of the car becomes a dealer in the commodity transported, the fact of ownership gives him an important advantage over his competitor.
4. When the owner of the car is also the owner of the commodity transported, an excessive rental for the car may amount to a preference in the freight rate as against the shipper who does not own his car.[2]

The Interstate Commerce Commission was then concerned chiefly in correcting the evil so prevalent at this time surrounding refrigeration of perishable products, particularly the refrigeration rate. It states particularly in its report that "the only way in which a complete remedy" [from unjust refrigeration rates] "can be afforded is by investing this commission, or some other tribunal, with power to inquire whether these charges are reasonable, and to make them reasonable if found unreasonable."[3] Two methods were recommended by the commission for correcting the discrimination resulting from exorbitant refrigeration charges.

1. By making the common carriers responsible to the public in the matter of this special equipment and this refrigeration service, if they are not now responsible.
2. By bringing the car-line companies which provide this refrigeration for interstate shipments under the jurisdiction of the act to regulate commerce, and making their charges subject to the determination of this commission.

Under the first method the commission said the following points should be embraced:

1. That the railway shall in all cases furnish the car needed for the movement of the traffic which it transports. This does not mean that the railway shall of necessity own the equipment itself, but that if it secures that equipment by lease it shall do so under conditions that the car, when provided, shall be its car. No railway should be per-

[1] I. C. C. Report 1902, p. 82. [2] I. C. C. Report 1904, p. 12. [3] I. C. C. Report 1904, p. 17.

mitted to transport the private cars of private individuals when it thereby works a discrimination against other shippers to whom it does not furnish similar cars.

2. That the railway shall furnish refrigeration when needed. This imposes no hardship upon that company. At the present time practically all railways have ice houses at which ice can be and is habitually supplied. Even when the Armour Car Lines performs the refrigeration, it buys, in the majority of cases, that ice from the railway company and, as a rule, the railway makes delivery of the ice into the bunkers of the car. If the railway prefers to discharge this duty by contract with some private individual or corporation, it should, nevertheless, stand responsible to the public for the service rendered, to the end that it shall be performed with an equality to all shippers at reasonable rates.

3. That the railway shall publish its charges for refrigeration and maintain those charges exactly as its transportation charges are published and maintained. That the charges as so published shall be subject to the jurisdiction of the Interstate Commerce Commission, which, when it finds the charges to be unreasonable, may determine what charges are reasonable.

4. Whenever the owner of the car is also the owner of the property transported, the compensation which the railroad company pays for the use of that car shall be subject to the jurisdiction of the commission; and when the commission has determined what is a reasonable compensation, no more shall be paid.[1]

The second method, the commission said, would require legislation of the following import:

1. That all persons or companies furnishing refrigerator cars and refrigeration for interstate transportation shall be subject to the act to regulate commerce.

2. That all refrigeration charges made by such persons or companies shall be published and adhered to, as is now provided for the publication of railway transportation charges.

3. That the charges so made shall be subject to the control of the Interstate Commerce Commission, which shall have power to determine whether such charges are reasonable, and if found unreasonable, to prescribe the amount which shall be charged.

4. When the owner of the commodity is also the owner of the car, the compensation for the use of the car shall be subject to the jurisdiction of the commission.[1]

Regulation of points 2, 3, and 4 under the first method has been secured; also regulation of points 2, 3, and 4 under the second method, although only indirectly as private car companies are not common carriers and are therefore not under the jurisdiction of the Interstate Commerce Commission. Point 2 under the first method has been recommended by the Interstate Commerce Commission in its decision in the Private Car case (50 I. C. C., 652) and its recommendation is being followed. Point 3 of the first method and points 2 and 3 of the second method have been effected by the Hepburn Act of 1906. Point 4 of both methods has recently been regulated by the car-service act of May 29, 1917.

Point 1 under the first method, urging that railways should not be permitted to transport private cars when a discrimination is thereby worked against other shippers to whom similar cars are not furnished has not yet been covered by regulation or legislation nor has there been legislation on point 1 under the second method providing for the bringing of private car companies under the jurisdiction of the Interstate Commerce Commission.

In its report for 1905 the Interstate Commerce Commission again referred to the subject of refrigeration charges and recommended the publication of the rates as a means of securing equitable and uniform charges.

As the business is now conducted, some railroad companies furnish refrigeration themselves, but in most cases it is furnished by independent companies which usually provide the car, for which the railway pays, and the ice, for which a charge is made against the shipper. Formerly there were several of these companies, but to-day the

[1] I. C. C. Report 1904, pp. 18, 19.

business has fallen into the hands of two or three, of which the Armour Car Lines is the principal. Extended investigations by the commission have led to the conclusion that the charges imposed are, in some cases at least, exorbitant, and that those charges are not uniformly exacted. * * *

In view of the great importance of these charges to the shipper, we suggest that the Congress ought to make that service, by express provision in the law, a part of the transportation itself. We do not at this time recommend that carriers should be prohibited from using private cars or from employing the owners of such cars to perform the icing service if they find that course to their advantage, but we do recommend that these charges should be put on the same basis as all other freight charges. They should be published and maintained the same as the transportation charge, and be subject to the same supervision and control.[1]

In 1904 the Bureau of Corporations in the investigation of the beef industry also investigated the operation of the packer cars. The results of that investigation are included in the report of that bureau in 1905. Testimony was also secured during the year 1905 by Congressional Committees on Interstate Commerce, which is reported in documents of the Fifty-ninth Congress.

REGULATORY PROVISIONS OVER PRIVATE CARS BY AMENDMENTS TO THE ACT TO REGULATE COMMERCE.

It will appear from the foregoing that the Interstate Commerce Commission was interested from its inception in the legal status of private car lines and that in a number of its annual reports to Congress up to 1906 it had pointed out remedial measures it deemed necessary to cope with the situation that was becoming more and more acute. In 1903 the Elkins Act was the first amendment to the Interstate Commerce Commission Act of 1887 affecting in any way the relation of private car companies to carriers. This act prohibited the use of commissions and rebate devices. They were in common use to greater or less degree up to this time and the Elkins Act enabled the commission, through its jurisdiction over the carriers, to investigate any such practices that it considered unlawful.

In 1906 the enactment of the Hepburn Act brought the subject of refrigeration rates directly under the supervision of the Interstate Commerce Commission. This grant of power was contained in the amendment affecting section 1 of the act, which now reads as follows:

That the provisions of this act shall apply * * * to any common carrier or carriers engaged in the transportation of passengers or property wholly by railroad * * * and the term "transportation" shall include cars and other vehicles and all instrumentalities and facilities of shipment or carriage, irrespective of ownership or of any contract, express or implied, for the use thereof and all services in connection with the receipt, delivery, elevation, and transfer in transit, ventilation, refrigeration or icing, storage, and handling of property transported; * * *.[2]

Only recently in an amendment to section 1 of the act, approved May 29, 1917, has the Interstate Commerce Commission been given power to regulate mileage rates. The section of the amendment conferring this power provides as follows:

The commission shall, after hearing, on a complaint or on its own initiative without complaint, establish reasonable rules, regulations, and practices with respect to car service, including the classification of cars, compensation to be paid for the use of any car not owned by any such common carrier and the penalties or other sanctions for nonobservance of such rules.

Prior to this amendment the only power of the Interstate Commerce Commission to regulate payments by a railroad for any service or

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[1] I. C. C. Report 1905, p. 7.

[2] Act of June 29, 1906.

instrumentality of transportation furnished by a shipper was contained in section 15 of the act. By this section it had power to determine the maximum charge which would be reasonable to be paid by the carrier. The act of May 29, 1917, however, grants it the power to initiate an inquiry into rates and also gives it power to determine not only the maximum but also the reasonable rate that should be paid for the use of a car.

PRIVATE CAR COMPANIES NOT COMMON CARRIERS.

According to the definition of "transportation" as contained in the Hepburn amendment to section 1, it was assumed that the Interstate Commerce Commission was given jurisdiction over private car companies. The question of its jurisdiction came to the fore in the investigation first instituted in 1912 in the matter of private cars, Docket 4906. The hearings were interrupted by the efforts of the Interstate Commerce Commission to insist upon replies to its questions from F. W. Ellis, of the Armour Car Lines.

Ellis objected to some of the questions asked him by counsel of the Interstate Commerce Commission, stating that they concerned a private business and the commission had no authority to compel an answer. He maintained that the Armour Car Lines was a private business and not a common carrier and as such did not come within the jurisdiction of the Interstate Commerce Commission. The commission took the question before the District Court of the Northern District of Illinois, Eastern Division. The decision was handed down by Judge Landis, who required that Ellis should appear before the commission upon due notice to make full and complete answers to its questions, and also to produce the documentary evidence required. Appeal was made to the Supreme Court and proceeding was brought under section 12 of the act to regulate commerce. The ultimate question to be decided was whether a corporation, not itself a common carrier engaged in transportation, may, by reason of the fact that it sells materials and service to railroads under contract, be compelled to lay before the commission in a public inquiry all its affairs, including detailed statements of its costs and profits.

The testimony sought by the Interstate Commerce Commission and covered by the various questions directed to Ellis was desired to ascertain whether Armour & Co. was controlling Armour Car Lines and using the same as a device:

1. To obtain concessions from the published rates of transportation, or to obtain rates of transportation on its shipments which were less than those contemporaneously applied to the transportation of like shipments of its competitors.

2. To obtain for it undue and unreasonable advantage which subjected competitors to undue and unreasonable prejudice and disadvantage.

3. To receive from common carriers for furnishing refrigerator cars and ice and for performing refrigeration services unreasonable compensation, which inured to the benefit of Armour & Co. by reason of which the provisions of sections 1, 2, 3, and 15 of the act, or any of them, had been or were being violated.

The questions for brevity may be grouped according to the grouping by the court as follows: First, those concerning inter-

locking officers and intercorporate relations between Armour Car Lines, Armour & Co., and the Fowler Packing Co.; second, those concerning the acquisition of cars previously owned by Armour & Co. and the Armour Packing Co. by the Armour Car Lines upon its organization; third, those covering contracts of Armour Car Lines with Armour & Co. and the Colorado Packing Co. for furnishing cars and icing service; fourth, those concerning the ownership, manufacture, repair, and handling of cars that would tend to indicate that Armour Car Lines was engaged in transportation as defined by the act; fifth, those concerning the production of statements showing profit and loss, credits and debits to income, etc.; and sixth, those concerning investment of Armour Car Lines in icing plants and the detailed results of the operation of each plant.

The appellant was required by the Supreme Court in its decision to answer the questions included in the first three groups. He was, however, not required to answer the questions included in groups 4, 5, and 6, which related particularly to ownership and expenses of operation.

The opinion delivered by Justice Holmes was in part as follows:

It [Armour Car Lines] has no control over motive power or over the movement of the cars that it furnishes as above, and in short, notwithstanding some argument to the contrary, *is not a common carrier subject to the act.* It is true that the definition of transportation in section 1 of the act includes such instrumentalities as the Armour Car Lines lets to the railroads. But the definition is a preliminary to a requirement that the carriers shall furnish them upon reasonable request, not that the owners and builders shall be regarded *as carriers, contrary to the truth.*

The control of the commission over private cars, etc., is to be effected by its control over the railroads that are subject to the act. The railroads may be made answerable for what they hire from the Armour Car Lines, if they would not be otherwise, but that does not affect the nature of the Armour Car Lines itself. * * *

If the price paid to the Armour Car Lines was made the cover for a rebate to Armour & Co., or if better cars were given to Armour & Co. than to others, or if, in short, the act was violated, the *railroads* are responsible on proof of the fact.[1]

It will be seen from this opinion that private car companies are not considered common carriers, even though their cars are operated by a carrier when on its lines. The only regulatory power that may be exerted by the Interstate Commerce Commission under this decision is, therefore, through its control over the carriers themselves.

At the time the Interstate Commerce Commission attempted to compel answers to its questions from the Armour Car Lines representative it was of the opinion that private car companies were completely within the jurisdiction of the commission because of the modification of section 1 of the act by the Hepburn amendment. From congressional debates on this amendment it appears evident that Congress intended to confer on the Interstate Commerce Commission full authority and jurisdiction over private car lines as common carriers. The Supreme Court, however, when the matter was brought to it for decision in 1914, did not believe that the language of the amendment was sufficiently explicit to place the private car lines completely within the jurisdiction of that body.

DUTY OF CARRIERS TO FURNISH EQUIPMENT.

In 1915 the Interstate Commerce Commission directed the Pennsylvania Railroad Co. to furnish tank cars to shippers of oil upon

[1] 237 U. S., 434, pp. 443, 444. No italics in original.

reasonable request.[1] This case arose because of the refusal of the Pennsylvania Railroad Co. to furnish the Pennsylvania Paraffine Works and the Crew-Levick Co. with all the tank cars required and demanded by these companies. The commission in its decision held that it had power under the act to require common carriers to furnish special types of cars upon reasonable request. The railroad questioned the power of the commission under the act to require it to furnish cars, and its contention was upheld upon a hearing by three judges in the District Court for the Western District of Pennsylvania.[2] The case was carried to the Supreme Court,[3] where the decision of the district court was affirmed.

The court held that the powers conferred on the Interstate Commerce Commission by the act and its amendments do not include the power to require carriers to provide and furnish oil tank cars—no question of discrimination being involved. Without attempting to define the measure of the carrier's duty to satisfy the needs of shippers by adding in quantity or kind to its car equipment the court held that Congress did not intend the enforcement of this duty to be compelled by orders of the Interstate Commerce Commission.

At the common law it is the duty of a carrier to supply an adequate and proper car equipment, but what constitutes a proper equipment is apparently a matter of changing conditions as industry develops. Thus, the view of the Interstate Commerce Commission on this point is cited with apparent approval by the Supreme Court[4] to the effect that it is the duty of railroad companies to provide and furnish equipment for the transportation of commodities, and that this duty may expand with time and conditions, the special car becoming the common car, and the shipper's right to demand it receiving the sanction of law. But whatever special kinds of equipment the courts, from time to time, may hold it the duty of carriers to provide,—and it does not seem to be definitely decided as to refrigerator cars as yet,—the duty to provide sufficient cars of these special kinds can not be enforced by the Interstate Commerce Commission, and the only remedy available to the shipper is a suit for damages.

Common-law duty of railroads to haul private cars.—Apparently three principles on this subject have been promulgated during recent years but no two of them can be reconciled to each other. First, the principle was established in court that railroad companies are in a sense public highways and as such are obliged to accept transportation in whatever form it is offered and even haul cars they do not own. The second interpretation is that "the law does not make it the duty of the railways to haul private cars, although such service is not prohibited."[5] Third, the Interstate Commerce Commission in 1904 stated that under the common-law duty of carriers to furnish cars, they may provide them "by purchase or by lease, and if the latter plan is adopted they may make contracts with one company which exclude the use of cars owned by other companies."[6] The first principle has been modified by the understanding that railroads could establish rules which would enable them to haul these private cars without interfering with their own traffic or submitting the public to danger or inconvenience. The

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[1] Pennsylvania Paraffine Works v. P. R. R., 34 I. C. C., 179.
[2] Penna. R. R. Co. v. U. S. et al., 227 Fed. Rep., 911.
[3] U. S. and I. C. C. v. Penna. R. R. Co., 242 U. S., 208.
[4] U. S. and I. C. C. v. Penna. R. R. Co. (242 U. S., 222).
[5] Railway Age, vol. 34, p. 552.
[6] 10 I. C. C., 360.

court established the fundamental principle, however, that anyone can demand of a railroad that it haul his personal car subject to reasonable rules and regulations and at a declared charge.

The first and the third principles may be reconciled on one point, namely, the common-law duty to furnish cars. On the question involving the duty of carriers to haul any and all cars offered under the regulations prescribed, they are exactly contradictory. The interpretation of this problem sanctioning the use of one company's cars on the lines of a carrier to the exclusion of the cars of other companies and shippers seems to be the one in general use to-day. It is doubtful, however, whether a court would approve the exclusive contract if the question were placed directly before it for decision, for the practice is directly contradictory to the common-law duty of the carrier to accept transportation in whatever form it is offered. A practical example[1] of this practice is the situation in the Southeast, where some of the more important lines have contracts with the Fruit Growers Express Inc. The vice president of one of the largest roads stated the railroad's position regarding the handling of a shipper's own cars as follows:

> If the cars are tendered empty and for transportation empty, the ...... Railway will charge its published tariff rates for the transportation.
>
> If the cars are tendered for transportation with loads the ...... Railway will refuse to receive the cars.

From the foregoing presentation it appears that after the passage of the Hepburn Act in 1906 up to the time of the Ellis case in 1914, it was the general opinion that private car companies were directly subject to the Interstate Commerce Commission. The Ellis case limited the jurisdiction of the Interstate Commerce Commission solely to matters affecting the operation of cars when on the carriers' lines. This authority, therefore, covers only the direct relations of the cars to the railroads. When on the lines of a common carrier they become a facility of transportation of that carrier and the Interstate Commerce Commission has power to regulate them through the railroad.

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[1] A letter to the commission showing the operation in the Southeast of shipper-owned cars is presented in the appendix as Exhibit 2.

PART II

THE PACKER CAR LINES AND THEIR RELATIONS TO THE PUBLIC

CHAPTER 1.

THE PACKERS' CARS.

Previous chapters have shown how the refrigerator car has been used by the leading men in the packing business in helping to develop their industry to its present position of concentrated power. The refrigerator car has made it possible for a company whose principal plant is in Chicago to deliver fresh meat to the retailer in the most remote part of the land as often as his needs require it. A system of branch houses and peddler car routes has been added. Thus established on a parity with the local packer, in so far as service in the delivery of a fresh product is concerned, it remained only for the big packer to employ the natural advantages at his command, resulting from the magnitude of the business, to direct his efforts against the existence of competition. That the private cars owned by the packers have been a vital factor in this process will be shown in this and the following chapters.

Table 1 gives a comparison of the number of cars owned by the Big Five packers and their affiliated companies in 1904, according to the report issued by the Commissioner of Corporations, and the number owned in 1917, as reported to the Federal Trade Commission in the present investigation.

TABLE 1.—*Comparison of cars owned by the Big Five packers and affiliated companies, 1904 and 1917.*

Company.	Number of cars owned in 1904.			Number of cars owned in 1917.			Company.
	Refrigerator cars and miscellaneous equipment.	Stock cars.	Total, all cars.	Total, all cars.	Stock cars.	Refrigerator cars and miscellaneous equipment.	
Armour & Co.			[1] 14,555	10,925			Armour & Co.
Armour Car Lines	12,029					5,199	Armour & Co. (car department).
Continental Fruit Express.	1,645					5,660	Fruit Growers Express Inc.
						41	Pittsburgh Provision & Packing Co.
						25	Armstrong Packing Co.
Cudahy Packing Co.	1,000		1,000	1,454		1,454	Cudahy Packing Co.
Nelson Morris & Co.	1,469	400	[2] 2,159	2,731		2,731	Morris & Co.
Swift & Co.			[3] 6,903	8,628			Swift & Co.
Swift Refrigerator Transportation Co.	5,473					6,832	Swift Refrigerator Transportation Co.

[1] Including 881 cars (Armour & Co. proportion 40.11 per cent) of the National Packing Co., dissolved 1912.
[2] Including 290 cars (Morris & Co. proportion 13.19 per cent) of the National Packing Co.
[3] Including 1,026 cars (Swift & Co. proportion 46.70 per cent) of the National Packing Co.

, which are used in the fresh fruit and vegetable business. ›urgh Provision & Packing Co., which is owned by the ·lerton interests, owns 41 refrigerator cars. The Armstrong o., of Dallas, Tex., owned by the Armour-Flippen interests, ank cars. This makes a total of 10,925 cars practically nour control.

be noticed that the Armour Car Lines and the Continental ›ress, which appear under Armour & Co. for the year 1904, ng in 1917. The Armour Car Lines was a separately incor- :ompany which owned all the cars used by Armour & Co. in › meat-packing business and the fruit and vegetable traffic A part of the fruit cars was owned indirectly through the ip of the capital stock of the Continental Fruit Express.[1] By ıh the Armour Car Lines and the Continental Fruit Express sed to exist as companies owning and operating cars. The · Car Lines was practically dissolved in 1914. Since that time r & Co. has operated the meat cars as a department of the g business and the fruit and vegetable cars have been operated newly organized company, the Fruit Growers Express (Inc.). Cudahy Packing Co. owns a total of 1,454 cars, of which there 105 refrigerators, 41 tanks, 2 box cars, and 6 gondolas. These re operated as a department of the packing company. Morris . owns 2,731 cars, of which 2,590 are refrigerator cars, used for ıipment of fresh meat and packing-house products, and 141 are . cars. Morris & Co. has a car-operating department but does ıave a separately incorporated car company.

wift & Co. and its subsidiary and affiliated companies own 8,628 , all of which are used in the packing business. These com- .ies own more cars for use in the packing business than the Armour ·rests. If Armour's fruit and vegetable cars are included, how- ·r, that company ranks first in the number of cars owned. Unlike ımour, Swift & Co. operates no cars as a department of its business .t has separate companies incorporated for the specific purpose of ·ning and operating car equipment. The Swift Refrigerator Trans- ›rtation Co. is the largest of these operating companies. It owns ,832 cars, including 6,316 refrigerators, 432 tanks, 37 box cars, 31 ondolas, 11 flat cars, and 5 racks. Swift & Co. has two subsidiary ompanies for the operation of its stock cars, the National Manufac- uring Co., which owns 1,581 double-deck cars, and the Swift Live Stock Transportation Co., which owns 90 double-deck and 19 single-deck cars. Libby, McNeill & Libby, a canning company, which was until recently a subsidiary of Swift & Co., and is now owned by the stockholders of Swift & Co., owns 60 refrigerators and 36 tanks. The Union Meat Co. of North Portland Oreg., and the Western Meat Co. of San Francisco, both under Swift control, own 4 refrigerator cars and 6 tank cars, respectively.

Swift & Co. had two operating car companies in 1904, the Swift Refrigerator Transportation Co. and Swift Live Stock Transportation Co.[2] These companies are still in existence. The National Manufacturing Co. is an old company, having been organized in 1890, but

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[1] Cars were also operated at that time by Armour Car Lines under such names as Kansas City Fr Express, Kansas City Dressed Beef Line, Barbarossa Refrigerator Line, and Tropical Refrigerator Exp It is apparent that such names gave no idea of the ownership of the cars.

[2] Swift cars were also operated under the trade names California Fruit Transportation Line, Dairy De Despatch, and German-American Refrigerator Line in 1904.

it apparently owned no cars in 1904, since it does not appear in the table published by the Commissioner of Corporations. The Western Live Stock Express Co., referred to in a footnote of Table 1, is a subsidiary of the National Manufacturing Co. It was organized in 1905 and operated a part of the Swift stock cars until July 1, 1917, when the company was absorbed by the National Manufacturing Co.

The subsidiary and controlled companies of Wilson & Co., Inc., own 2,112 cars. The Wilson Car Lines is a separately incorporated company owning 1,966 cars which Wilson & Co., Inc., uses for the most part in the shipment of its own products. These cars include 1,562 refrigerators, 280 stock cars, 122 tanks, 1 gondola, and 1 rack car. T. M. Sinclair & Co. (Ltd.), of Cedar Rapids, Iowa, which is under Wilson control, owns 132 refrigerators and 6 tank cars and operates them, together with some leased cars, as the Cedar Rapids Refrigerator Line. The Morton-Gregson Co. of Nebraska City, Nebr., another Wilson concern, owns 8 tank cars.

It will be noticed that the names of Schwarzschild & Sulzberger Co., Cold Blast Transportation Co., and Lackawanna Live Stock Transportation Co., which appear in the table for 1904, do not appear in 1917. Schwarzschild & Sulzberger Co. was reorganized as Sulzberger & Sons Co. in 1910 and later as Wilson & Co., Inc., in 1916. The Wilson Car Lines was incorporated at the time of the reorganization in 1916 to operate the cars formerly owned by the Cold Blast Transportation Co. and Lackawanna Live Stock Transportation Co.

In Table 1 the Armour cars, which are used in the fruit and vegetable traffic—that is, the Fruit Growers Express Inc. cars—are included. Throughout the remainder of this and the following chapter these cars will not be included as packer equipment. Presentation of facts in these chapters will be confined to cars used in the transportation of meat and packing-house products. The Fruit Growers Express Inc. will be treated separately in a later chapter. Tables 2 and 3 show the number of cars of each kind owned by the Big Five packers and their affiliated companies on December 31, 1914 and 1917.

TABLE 2.—*Cars owned by the Big Five packers and affiliated companies, 1914.*

Company.	Refrigerator cars.		Stock cars.		Tank cars.	Miscellaneous equipment.	All cars.
	Beef cars.	Other refrigerator cars.	Double deck.	Single deck.			
Armour & Co.:							
Armour & Co. (car department)	3,772	2,520			219	32	6,543
Pittsburgh Provision & Packing Co. (Armour-Allerton interests)		[1] 41					41
Armstrong Packing Co					31		31
Cudahy Packing Co	1,460				35	7	1,502
Morris & Co	2,031			152	71		2,254
Swift & Co.:							
Swift Refrigerator Transportation Co	5,555	949			408	112	7,024
Swift Live Stock Transportation Co				188			188
National Manufacturing Co			913				913
Western Live Stock Express Co			793				793
Libby, McNeill & Libby	52	33			16		101
Western Meat Co					6		6
Union Meat Co		[1] 4					4
Wilson & Co., Inc.:							
Wilson Car Lines	[2] 1,656				48	1	1,705
T. M. Sinclair & Co. (Ltd.)	34	99			6		139
Morton-Gregson Co					8		8
Total	14,560	3,646	1,706	340	848	152	21,252

[1] Equipped with beef rails but no brine tanks. [2] Includes 10 sales cars.

TABLE 3.—*Cars owned by the Big Five packers and affiliated companies, 1917.*

Company.	Refrigerator cars.		Stock cars.		Tank cars.	Miscellaneous equipment.	All cars.
	Beef cars.	Other refrigerator cars.	Double deck.	Single deck.			
Armour & Co.:							
Armour & Co. (car department)	3,840	1,104			232	23	5,199
Pittsburgh Provision & Packing Co. (Armour-Allerton interests)		[1] 41					41
Armstrong Packing Co					25		25
Cudahy Packing Co	1,405				41	8	1,454
Morris & Co	2,590				141		2,731
Swift & Co.:							
Swift Refrigerator Transportation Co	5,989	327			432	84	6,832
Swift Live Stock Transportation Co			90	19			109
National Manufacturing Co			[2] 1,581				1,581
Libby, McNeill & Libby	35	25			36		96
Western Meat Co					6		6
Union Meat Co		[1] 4					4
Wilson & Co., Inc.:							
Wilson Car Lines	[3] 1,562			280	122	2	1,966
T. M. Sinclair & Co. (Ltd.)	33	99			6		138
Morton-Gregson Co					8		8
Total	15,454	1,600	1,671	299	1,049	117	20,190

[1] Equipped with beef rails, but no brine tanks.
[2] Includes 759 cars taken over from the Western Live Stock Express Co. July 1, 1917.
[3] Includes 10 sales cars.

By way of explanation it may be well to repeat that for the purposes of this report a refrigerator car equipped with brine tanks and beef rails is considered a beef car. The beef carcasses are suspended from the roof of the car by means of hooks placed on these rails. Fresh meat is sometimes shipped in the ordinary refrigerator car, but a brine-tank car is the only car suitable for such shipments during all seasons of the year. A lower temperature can be maintained in a brine-tank car in which crushed ice and salt are used than in an ordinary refrigerator car equipped with ice bunkers for the use of block ice.

Under the heading "Other refrigerator cars" all refrigerators not equipped for the shipment of fresh meat are included. Most of these cars are equipped with ice bunkers and a few so-called dairy cars are equipped with brine tanks. These cars are sometines used for the shipment of fresh meat, but for the most part are used only for packing-house products, dairy products, dressed poultry, and the like. A few of these "other refrigerators" owned by the packers are ventilator refrigerators with no ice tanks or bunkers. Such cars are suitable only for the shipment of beverages and some fruits and vegetables, except in the winter season, when they may be used for packing-house products. Stock cars are used for the transportation of live stock. The double-deck cars are suitable for carrying hogs, sheep, calves, and goats, while the single decks are used for cattle. The tank cars owned by the packers are used for the shipment of edible oils, tallows, greases, and tankage. Under the heading "Miscellaneous equipment" are included box cars, used for the most part in transporting nonperishable products, and gondolas, racks, and flat cars, which are used locally in the yards.

It is shown in Table 3 that the Big Five packers own 15,454 beef cars and but 1,600 other refrigerator cars. The beef car being suitable for carrying all meats, while the ordinary refrigerator car is not satisfactory for the shipment of fresh meat in the warmer months, it is desirable for the packer to own the general utility car, the beef car, even though it does require a somewhat larger original outlay. The table further shows that the larger part of the packers' stock cars are double decks owned by the Swift companies. These cars are used to ship live hogs from the West to the New England plants owned by companies affiliated with Swift & Co.

The tables show that the packers owned 21,252 cars in 1914 and only 20,190 cars in 1917, a loss of 1,062 cars. A large loss will be noted in the number of "Other refrigerator cars"; there were 3,646 of these cars in 1914 and but 1,600 in 1917, a decline of 2,046 cars. This loss was due largely to the fact that Armour & Co. was dismantling a large number of the old cars which it formerly used in the fruit and vegetable traffic. Morris & Co. and Swift & Co. show material gains in the number of their beef cars. The tank cars show an increase of 201 cars. The other packers, Cudahy, Morris, and Wilson, increased their holdings of this class of equipment. There was a slight decrease in the number of stock cars and miscellaneous equipment.

INDEPENDENT PACKING COMPANIES.

Consideration should be given also to the equipment of the independent packing companies. Tables 4 and 5 show the number of the various kinds of cars owned by these companies on December 31, 1914 and 1917.

TABLE 4.—*Cars owned by independent packing companies, 1914.*

Company.	Refrigerator cars.		Tank cars.	Miscellaneous equipment.	All cars.
	Beef cars.	Other refrigerator cars.			
Arbogast & Bastian Co	3				3
Beech-Nut Packing Co.[1]		5			5
Carstens Packing Co	3		4		7
Cincinnati Abattoir Co	83				83
Cleveland Provision Co	28	65			93
Consolidated Dressed Beef Co	10				10
Cudahy Bros. Co. (Milwaukee)	60	184	2		246
Jacob Dold Packing Co	213		8	5	226
Evansville Packing Co	10				10
Wm. Focke's Sons Co		3			3
Frye & Co		15	4	2	21
H. J. Heinz Co.[1]		52	54		106
Houston Packing Co		24	10		34
Independent Packing Co. (Chicago)	100				100
Indianapolis Abattoir Co	104				104
Kingan & Co. (Ltd.)	251	210	6	9	476
John Morrell & Co	78	123	9		210
St. Louis Independent Packing Co	150				150
F. Schenk & Sons Co		5			5
Terry Packing Co. (fish)		10			10
Western Packing & Provision Co	10				10
Total	1,103	696	97	16	1,912

[1] Not slaughtering companies.

TABLE 5.—*Cars owned by independent packing companies, 1917.*

Company.	Refrigerator cars.		Tank cars.	Miscellaneous. equipment.	All cars.
	Beef cars.	Other refrigerator cars.			
Arbogast & Bastian Co.	3				3
Beech-nut Packing Co.[1]		5			5
Carstens Packing Co.	3		4		7
Cincinnati Abattoir Co.	100				100
Cleveland Provision Co.	26	46			72
Consolidated Dressed Beef Co.	5				5
Cudahy Bros. Co. (Milwaukee)	62	178	4		244
Darling & Co.[2]			15		15
Jacob E. Decker & Sons	10	5			15
Jacob Dold Packing Co.	254	3	8	5	270
Evansville Packing Co.	6				6
Wm. Focke's Sons Co.		3			3
Frye & Co.		15	4	2	21
H. J. Heinz Co.[1]		52	54		106
Houston Packing Co.		20	10		30
Independent Packing Co. (Chicago)	99				99
Indianapolis Abattoir Co.	109				109
Kingan & Co. (Ltd.)	200	347	6	9	562
John Morrell & Co.	109	110	9		228
St. Louis Independent Packing Co.	150				150
F. Schenk & Sons Co.		5			5
Western Packing & Provision Co.	[3] 10				10
Total	1,146	789	114	16	2,065

[1] Not slaughterers.
[2] This company is controlled by the Big Five interests.
[3] Only 5 at end of year.

Table 5 shows that the independent packing companies owned 2,065 cars on December 31, 1917, of which there were 1,146 beef cars, 789 other refrigerators, 114 tanks, and 16 miscellaneous. These companies own approximately one-tenth as many cars as the Big Five packers. It may be noted that the percentage of beef cars of the independents is less than that of the Big Five packers whose beef cars comprise by far the larger part of their equipment. There are two factors to be considered here, the cost of the car and its use. The beef car is more expensive than the ventilator refrigerator and the small packers with limited capital, therefore, invest sparingly in this class of equipment. They also have less use for the beef car than the big packers, for a smaller percentage of their shipments are of fresh meat. Many of the small packers confine themselves almost entirely to the packing of pork products and the slaughtering of a small amount of beef for local consumption.

The tables show that these companies have increased their equipment slightly from a total of 1,912 cars in 1914 to 2,065 in 1917. There was some increase in the beef cars, refrigerators, and tanks; the miscellaneous equipment remained the same. It will be noted that these companies own no stock cars. They therefore have to depend upon the railroads and the independent private car companies to furnish this equipment.

In addition to the packing companies enumerated in the foregoing tables, there are some other shippers of food products who own cars. For example, the California Despatch Line, San Francisco, incorpora-

ted by the California Wine Association, owns 136 tank cars which are used in the shipment of the association's products. The St. Louis Refrigerator Car Co., organized for the purpose of transporting the products of the Anheuser-Busch Brewing Association, owns 981 ventilator refrigerator cars. Moseley Bros., a commission firm of Grand Rapids, Mich., owns 26 ventilator refrigerators and 2 box cars, which are used in the shipment of fruits and vegetables. These companies are not in the meat-packing business and they have, therefore, not been included in the comparative statistics of the cars owned by the Big Five and other packing companies.

It is apparent that the equipment owned by the independent packing companies is small as compared with that of the Big Five packers. The Big Five and their affiliated companies owned 20,190 cars in 1917; the independent packing companies owned 2,065 cars. Table 6 carries the comparison further:

TABLE 6.—*Comparison of cars owned by Big Five packers and the independent packing companies, Dec. 31, 1917.*

Kind of car.	Big Five.		Independent packing companies.		Total.
	Number.	Per cent.	Number.	Per cent.	
Beef cars	15,454	93.1	1,146	6.9	16,600
Other refrigerator cars	1,600	67.0	789	33.0	2,389
Stock cars	1,970	100.0			1,970
Tank cars	1,049	90.2	114	9.8	1,163
Miscellaneous equipment	117	88.0	16	12.0	133
Total	20,190	90.7	2,065	9.3	22,255

The Big Five packers and their affiliated companies own over 90 per cent of all the cars owned by the packing interests of the country, more than 93 per cent of the beef cars, and 100 per cent of the stock cars owned by such interests.

REFRIGERATOR CARS.

An adequate supply of refrigerator cars is necessary for an interstate packing business. It is especially necessary that transportation facilities be adequate in the packing industry because the storing facilities of most plants are very limited. The refrigerator rooms in a packing plant are for the purpose of cooling the meat after it is slaughtered and are not intended for storage purposes. They are expensive to operate and are never made larger than the needs of the business require. The fresh meat must therefore be continually shipped out or the plant must cease operation when the cooling rooms become filled.

It is necessary to consider all the refrigerator car equipment of the country in forming a conclusion as to the possibility of the successful operation of a packing plant without the ownership of refrigerator cars. Tables 7 and 8 show the number and percentage of beef and other refrigerator cars owned by the Big Five packers, independent packing companies, and railroads, December 31, 1917.

TABLE 7.—*Number of refrigerator cars owned by all packing companies, private car companies, and railroad interests, Dec. 31, 1917.*

Kind of car.	Packing companies.			Private-car companies.	Railroad interests.			Total.
	Big Five.	Independent.	Total.		Railroad-owned operating companies.	Railroads.	Total.	
Beef	15,454	1,146	16,600	275				16,875
Other refrigerator	[1] 7,260	789	8,049	6,003	32,137	54,273	86,410	100,462
Total	22,714	1,935	24,649	6,278	32,137	54,273	86,410	117,337

[1] Includes 5,660 cars owned by the Fruit Growers Express (Inc.).

TABLE 8.—*Percentage of refrigerator cars owned by Big Five packers and other interests, Dec. 31, 1917.*

Interests owning cars.	Beef cars.	Other refrigerators.	All refrigerator cars.
Big Five packers	91.6	7.2	19.4
Independent packing companies	6.8	.8	1.6
Other private-car companies	1.6	6.0	5.3
Railroad interests:			
Railroad operating companies		32.0	27.4
Railroads		54.0	46.3
		86.0	73.7
Total	100.0	100.0	100.0

These tables show clearly the extent of control by the Big Five packers of the beef cars of the country. Of the total of 16,875 such cars the Big Five packers own 15,454, or 91.6 per cent. The independent packing companies own 1,146 beef cars, and other private car companies own but 275. The railroads own none. The packer who desires to ship fresh meats must own his cars, since he can not secure any beef cars from the railroads and has limited opportunity to lease any from private car companies. This fact was testified to by F. H. Frederick, of the Swift Refrigerator Transportation Co., before the Interstate Commerce Commission hearing in Chicago February, 1918, when he said that a man could not engage in the packing business unless he could raise enough capital, not only to start a packing plant but to provide his transportation facilities as well.

When Mr. Frederick testified that it was necessary for a packer to own his cars, he was referring presumably to all refrigerator cars. It is apparent from Tables 7 and 8, however, that the independent packers have more opportunity to secure ordinary refrigerator cars than beef cars. The railroad interests own 86,410 refrigerator cars and the independent private-car companies own 6,003. Virtually all the refrigerator cars owned by the private-car companies are leased to railroads and industries other than the packing industry. The packers who do not own their refrigerator cars depend for the most part on the railroads to supply them.

There are certain disadvantages and inconveniences attendant on the use of railroad refrigerators which must be met by the small packer who depends upon this class of equipment. The supply is

not always adequate, for although the railroads own a large number of refrigerators they are for the most part for use in the fruit and vegetable traffic, and consequently in certain seasons there is a deficiency in the supply available for the packing business. The railroad car, also, is often in poor condition. It is used for handling all kinds of perishable freight, some of which, such as vegetables with a pungent odor, render the car unfit for a shipment of meat until it is thoroughly cleaned, which is expensive to the shipper (see p. 48). Railroad cars are often used for ordinary heavy freight, which sometimes damages the insulation or ice bunkers. When the cars are in such condition, the proper temperature can not be maintained and the product often suffers damage in transit.

Packers sometimes use the ordinary refrigerator cars of the railroads for the shipment of fresh meats. Fairly satisfactory results are obtained in cool weather. It is expensive to the shipper, however, for he must equip the car with rails, at a cost of $10 to $25 per car, and hooks costing about $15 per car. Since he can not arrange for the return of the car to his own plant, the expense of the rails is a loss. He can arrange for the return of the hooks, but they are often lost in transit. The packer who owns his car does not have like difficulty, for the hooks are supposed to be left in the car and returned with it to the packer's plant. Lost hooks are a considerable item of expense even to those who own their cars, but the loss is relatively greater to those who do not own equipment. A further advantage to the owner of cars over the user of railroad-owned equipment is in the privilege of routing his car as he pleases. If a shipper is furnished a car by a carrier, he gives the long haul to the railroad furnishing the car. This is frequently annoying and inconvenient, especially in times of car shortage and congestion of traffic.

The advantage to a packer who owns a sufficient supply of cars to take care of his business is most marked in times of car shortage and other transportation difficulties. The Big Five packers are in an especially advantageous position at such times, for they secure the greatest possible service out of their equipment through their extensive force of experts whose business it is to see that the cars move.

The smaller packers owning cars have a great deal of trouble in such times. None of them have enough cars to warrant the maintenance of a car service force comparable to that of the Big Five; and their cars move very slowly or are often entirely diverted from their own traffic. Those owning no cars find it extremely difficult to secure any from the railroads. During the winter of 1917–18 some plants were shut down entirely, because no cars were available to carry the products. Of course the Big Five packers are not free from these troubles, but their better facilities place them in a comparatively secure position, so that in general their business continues uninterruptedly during times of transportation troubles, whereas the small packer suffers severe losses from a lack of equipment.

STOCK CARS.

The ownership of stock cars for the transportation of live stock from the producing area to the packing plant is of less importance

than the ownership of refrigerator cars. The railroads have always owned a large proportion of the stock cars, and most shippers have depended upon the carriers to furnish this class of equipment. Table 9 shows the number and percentage of stock cars owned by the Big Five packers, independent private-car companies, and railroads, December 31, 1917.

TABLE 9.—*Total stock cars in the United States, classified by ownership, Dec. 31, 1917.*

Kind of car.	Swift & Co. and Wilson & Co., Inc.		Independent car companies.		Railroads.		Total.	Per cent.
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.		
Double deck	1,671	[1] 13.1	1,046	8.2	10,007	78.7	12,724	100
Single deck	299	.3	12,956	13.7	81,493	86.0	94,748	100
Total	1,970	1.8	14,002	13.0	91,500	85.2	107,472	100

[1] All owned by subsidiary companies of Swift & Co.

The independent packing companies own no stock cars whatever, nor do Armour & Co., Morris & Co., or the Cudahy Packing Co. The other two big packers (Swift & Co. and Wilson & Co., Inc.) own but 1.8 per cent of the total stock cars in the country; the independent private car companies who lease cars to railroads and shippers own 13 per cent; the railroads own the remaining 85.2 per cent. It is the general opinion of the transportation experts that if stock cars were properly used and distributed the supply would be more than adequate to meet the need of shippers. Stock cars are often used for the transportation of dead freight, and such use, of course, cuts down the supply available for the shipment of live stock. Charges have been made also that railroad cars are not fairly distributed; that there is discrimination in favor of the Big Five packers. Whether it is from an actual deficiency in the total supply of equipment, from misuse, or discrimination, it is evident from the complaints of the small shippers that they are sometimes unable to secure cars for the movement of their live stock. The small packers had considerable difficulty in getting cars in the winter of 1917–18 during the period of general car shortage and congestion of traffic. The shippers who owned stock cars were, of course, at an advantage during this period because they were able through tracing organizations to keep some record of car movements and make the necessary effort to get their cars home.

The situation in regard to double-deck cars is quite different from that of stock cars in general. It will be seen in Table 9 that Swift & Co., through its subsidiary car companies, owns 13 per cent of the double-deck cars, the independent private car companies 8 per cent, and the railroads approximately 79 per cent. It is advantageous to the shipper of live stock to use a double-deck car, because the freight charges are lower on such shipment than in a single deck. The table shows that Swift & Co. is the only shipper in the country owning double-deck cars. All other packing companies must depend on private car companies or railroads for this kind of equipment. Neither of these sources proves adequate. It is evident from the

table that the private car companies have very few such cars to lease. The railroads have more than 10,000 double decks, but this number is small in comparison with the 80,000 single decks owned by the carriers. It often happens that a carrier has a single deck available and furnishes it to the shipper, even though a double deck has been ordered. The railroad is perhaps partial to the single deck because of the greater revenue from the shipment of live stock in this kind of car. Whatever the reason may be, it is true that shippers are often furnished single-deck stock cars in lieu of doubles. As a consequence they pay more freight on their shipments.

LEASED EQUIPMENT.

For the purposes of this report a leased car is considered as one which is leased by a private-car company to a shipper to be used exclusively by that shipper for a definite period of time. The control of the movement of the car passes to the shipper. To all intents and purposes he is the owner. The car is usually stenciled in the name of the shipper and is supposed to be returned directly to his plant for reload. A number of packers, large and small, use leased equipment, some as supplementary to cars which they own and others as their entire car supply. Table 10 shows the number of each kind of car leased by the Big Five packers in 1917.

TABLE 10.—*Leased cars operated by Big Five packers and affiliated companies, 1917.*

	Beef cars.	Other refrigerator cars.	Stock cars.	Tank cars.	All cars.
Armour & Co.			154		154
Armstrong Packing Co.				10	10
Cudahy Packing Co.		136			136
Morris & Co.			150		150
Swift & Co.:					
National Manufacturing Co.			116		116
Swift Live Stock Transportation Co.			321		321
Union Meat Co.	[1] 25				25
Western Live Stock Express Co.			100		100
Wilson & Co., Inc.:					
T. M. Sinclair & Co. (Ltd.)	45	53			[2] 98
Wilson Car Lines		46		31	77
Total	70	235	841	41	1,187

[1] Leased from Swift Refrigerator Transportation Co.
[2] 73 of these cars are leased from the Wilson Car Lines.

The number of cars leased is small in comparison with the number of cars owned by the Big Five packers. They leased 1,187 cars and owned 20,190 cars in 1917. Most of the cars leased are stock cars. Swift & Co. and Wilson & Co., Inc. are the only packers who own stock cars. Swift & Co. leases 537 stock cars in addition to the 1,690 which it owns.

Rental rates on stock cars leased by the Big Five packers are very low, varying from 30 to 40 cents per day. The packers get the mileage allowance on these cars and have practically no expense in operating them, as the owner in each case pays for repairs. The stock cars operated by the packers made an average of 73.6 miles per day

during the year 1917. At six-tenths cent per mile this would yield 44 cents per car per day. Since they pay a rental of only 30 to 40 cents per day, it would seem that the operation of leased stock cars is a profitable part of their business as well as a convenience to them.

The Cudahy Packing Co. leases 136 refrigerator cars from the Mather Railway Equipment Co., on which it now pays $21.50 per car per month. The Mather Co. bears the cost of repairs on these cars. T. M. Sinclair & Co. (Ltd.) leases 73 of its 98 refrigerator cars from Wilson & Co., Inc., its parent concern, and the rates of rental are therefore unimportant. Sinclair also leases 25 cars from the Federal Refrigerator Despatch Co., on which it pays $17.50 per car per month, less mileage earnings, and makes the repairs. The Wilson Car Lines paid $19 per car per month, less mileage, on its refrigerator cars in 1917, and had practically no expense of repairs, as they were paid by the lessor. On its tank cars the Wilson Car Lines paid $40 per month without credit for mileage earnings. The lessor made the repairs on these cars. The Armstrong Packing Co. pays $65 per month, less mileage earnings, for its tank cars, but does not pay for repairs.

Table 11 shows the number of cars leased by independent packing companies.

TABLE 11.—*Cars leased by independent packing companies from independent car companies, 1917.*

Company.	Beef cars.	Other refrigerator cars.	Stock cars.	All cars.
Carondolet Packing Co			3	3
Cincinnati Abattoir Co	43			43
Coffin Packing & Provision Co		2		2
Consolidated Dressed Beef Co			30	30
Dunlevy Packing Co	4			4
East Tennessee Packing Co		1		1
Evansville Packing Co	15			15
John J. Felin & Co. (Inc.)	10			10
Fostoria Provision Co	10			10
H. J. Heinz Co. [1]		84	196	280
Henneberry & Co	2			2
Nagle Packing Co. [2]			44	44
Nuckolls Packing Co	5			5
St. Louis Independent Packing Co	47			47
Sartorius Provision Co			3	3
White Provision Co	5			5
Wolff Packing Co	4			4
Total	145	87	276	508

[1] Not a slaughtering company.
[2] This company is controlled by the Big Five interests.

It can not be said that these are all the cars leased by the independent packing companies, but they are all that have been reported to the commission in answer to its inquiries. It may be noted that the independents lease a larger number of cars proportionately to the number owned than the Big Five packers. The independents lease 508 and own 2,065, while the packers lease 1,187 and own 20,190.

Of the 275 beef cars owned by independent private car companies and available for lease to packing companies (see Table 6) the Big Five packers lease 5 and the independent packing companies lease

145 cars (see Table 11), making a total of 150 of these cars accounted for and leaving 125 such cars available to other small packing companies for temporary use. Probably a few other of these beef cars are leased to independent packing companies, which have not been reported to the commission. The independent packing companies have reported that they lease 87 other refrigerator cars, 84 of which are in the service of H. J. Heinz Co. Of the 276 stock cars leased, the Heinz Co. has 196, which it uses for the most part in carrying tomatoes. The remainder of the stock cars leased by the independent packing companies are in the service of slaughterers, who use them in the transportation of live stock.

The Cincinnati Abattoir Co. paid $27.50 per car per month, less mileage earnings, for its refrigerators up to November 15, 1917; when the rate was raised to $32.50. The lessor keeps the cars in repair. The Consolidated Dressed Beef Co. paid $9 per month for its leased stock cars and was credited with the mileage earnings, but had to pay for repairs. These cars are no longer leased. The Evansville Packing Co. paid $15 per month, less mileage earnings, for its beef cars, and the repairs were made by the lessor. H. J. Heinz Co. paid $15 per month, less mileage earnings, on its refrigerator cars up to December 1, 1917, when the rate was raised to $18 per month. For its stock cars it paid from $13.50 to $22.50 per month during 1917, less mileage earnings, the lessors in each case bearing the cost of repairs. The Nagle Packing Co. pays $13.50 per month, less mileage, for its stock cars and has no expense for repairs. The St. Louis Independent Packing Co. paid $15 per month, less mileage, for its beef cars. The lessor made all repairs. The other smaller companies pay various rates for the cars which they lease.

CAR SHOPS.

In addition to the operation of their private cars on the lines of the carriers the Big Five packers maintain extensive car shops in various cities for the repair and rebuilding of old cars and the construction of new equipment. All the large packers make the majority of repairs in their own shops. H. L. Osman, of Morris & Co., has stated that his company does 80 per cent of the repair work on its cars. Practically the only repairs made by the railroads on the big packers' cars are the light, running repairs. It is of considerable advantage to the Big Five packers to make their own repairs. The cost of repairs in their shops is less than the Master Car Builders' scale of prices, according to the testimony of Mr. Osman at the Interstate Commerce Commission hearing in Chicago, February, 1918. The large packers, who have a sufficient number of cars to warrant the maintenance of car shops, have a competitive advantage over the small packers, whose supply of equipment is not large enough to warrant it. The small companies must allow the carriers to make the majority of their repairs and they must pay the regular Master Car Builders' prices for them.

Armour & Co. and Swift & Co. are also equipped to build new cars. These companies build cars for less money than they can be bought in the open market, since they do not have to pay the car builder's profit. The saving to them at the present time amounts to several

hundred dollars per car. They have this advantage over shippers who are not large enough to maintain shops for the building of their equipment. Armour & Co.'s maximum production is five cars per day, but it is not able to keep up this rate throughout the year. Swift & Co. can build four cars per day. Transportation conditions greatly affect the number of cars built by the Big Five packers. For example, Swift & Co. built only 141 cars in 1916, whereas in 1917, when the need for additional equipment was great, this company built 698 cars.

The total capital investment of the Big Five packers in car shops and equipment is $1,911,721.72, according to reports submitted by them. Table 12 shows the amount of the various items for each company.

TABLE 12.—*Investment of Big Five packers in car shops.*

Company.	Land.	Buildings and machinery.	Other investment.	Total.
Armour & Co.	(1)	$203,619.95	$812.98	$204,432.93
Cudahy Packing Co.	[2] $111,553.50	90,434.50		201,988.00
Morris & Co.	(1)	90,445.18		90,445.18
Swift & Co.	657,696.71	468,282.22		1,125,978.93
Wilson & Co., Inc.		[3] 276,876.68	12,000.00	288,876.68
Total	769,250.21	1,129,658.53	12,812.98	[4] 1,911,721.72

[1] Not reported.
[2] Includes tracks.
[3] Includes land.
[4] It should be noted that this figure does not include the investment of Armour & Co. or Morris & Co. in land nor the investment of any of the companies in inventories of materials and supplies. It can not therefore be considered as representative of the entire investment of the Big Five packers in car shops.

Armour & Co. has its principal car shops at Chicago, with additional shops at Kansas City, South Omaha, East St. Louis, Sioux City, St. Joseph, and Cincinnati. The Chicago shops are equipped for the building of new cars. This company built 500 new cars in 1917 and had built 350 cars up to September, 1918. The Cudahy Packing Co. has but one car shop, located at East Chicago, Ind. It is equipped to make light repairs at Sioux City, South Omaha, Kansas City, and Wichita. Morris & Co. has but one car shop, located at Chicago, but this company also makes light repairs at its outside plants. Swift & Co.'s principal shop is in Chicago, but it also has shops located at East St. Louis, Kansas City, South St. Joseph, South St. Paul, Omaha, and Elkhart, Ind. Wilson & Co., Inc., has shops at Chicago and Kansas City and also maintains a force of repair men at Oklahoma City, but it has no shops at that point. A car shop is operated at Fort Worth by the Southwestern Mechanical Co., which is jointly owned by Armour & Co. and Swift & Co.

CONCLUSIONS.

The great size of their operations has enabled the Big Five packers to invest millions of dollars in car equipment for the transportation of their products. They move a large part of their dressed beef, packing-house products, tallows, oils, and greases in their own cars. Some of their live stock is also transported in their own equipment.

They have an adequate supply of cars to take care of their business in normal times, and two of them are equipped to build new cars to take care of their expanding business and unusual demands. Although they are not entirely free from transportation troubles, the Big Five packers are in a much stronger position than other packing companies.

Most of the small independent packing companies own no cars. None of them are able to rely on their own equipment to the extent that the Big Five packers are. They must depend largely upon securing cars from independent private car companies or from the carriers. These sources are especially unreliable for the beef refrigerator cars. The Big Five packers own 91.6 per cent of all the beef cars in the country. Independent private car companies own but 275 such cars and the railroads own none.

The independent packing companies own no stock cars. While they have little difficulty in securing single-deck cars, they have great difficulty in securing double decks. Private car companies and railroads own very few double-deck cars in comparison with the number of single decks owned. The small packer is often compelled to ship his live stock in single-deck cars, and he suffers hardship because of the higher freight charges on such shipments.

CHAPTER 2.

OPERATION OF THE PACKERS' CARS.

That the Big Five packers receive expedited service from the railroads in the operation of their equipment will be shown in this chapter. Their cars make more miles per day than the cars of any other packing companies or private car companies. They therefore make larger earnings and give better service to their owners than the cars of other companies. The figures of loaded and empty mileage will show that the Big Five packers' cars are almost invariably returned empty to the owners immediately after completing a trip. It will be remembered (see Part I, chap. 3) that the cars of other companies are often reloaded by the carriers and diverted to other traffic, at times even in an opposite direction from home. The statistics on the rates of mileage paid by railroads for the use of private equipment show that the Big Five packers have been getting on the average a higher rate per mile than the independent packers.

For present purposes the operating results of refrigerator cars and stock cars only will be considered. These two kinds of cars comprise approximately 95 per cent of all packer equipment. The operating results of the packers' stock cars and refrigerator cars are compared with similar statistics of operation of the cars of other companies.

OPERATION OF REFRIGERATOR CARS.

As most of the packers' cars are refrigerators, which are used for the handling of dressed beef, packing-house, dairy, and poultry products, the operation of these cars will first be considered. They not only make more miles per day in normal times than the cars of other companies, but they maintain their high rate of movement in times of transportation troubles, such as were experienced in 1917, while other companies' cars at such times move much more slowly than usual. Tables 13 and 14 show the number of cars owned and operated by the Big Five packers in the years 1914 and 1917, the total car-miles, the average number of days each car was in actual service, and the average miles per car per day.

TABLE 13.—*Operation of refrigerator cars owned by Big Five packers and affiliated companies, 1914.*

Company.	Number of cars owned and operated.	Total car-miles.	Average number of days each car was in actual operation.	Average miles per car per day.
Armour & Co.:				
Armour Car Lines	[1] 6,156	161,389,327	[2] 340	77.1
Pittsburgh Provision & Packing Co. (Armour-Allerton interests)	41	261,053	[2] 260	24.5
Cudahy Packing Co	1,460	49,836,911	292	116.9
Morris & Co	[3] 2,050	57,694,957	[2] 340	82.8
Swift & Co.:				
Libby, McNeill & Libby	85	1,939,544	324	70.4
Swift Refrigerator Transportation Co	[4] 6,490	148,972,005	308	74.5
Union Meat Co	4	3,744	183	[5] 5.1
Wilson & Co., Inc.:				
T. M. Sinclair & Co. (Ltd.)	133	3,012,378	[2] 340	66.6
Wilson Car Lines	[6] 1,633	40,912,935	292	85.8
Total	18,052	464,022,854	320	80.3

[1] Owned 6,292 cars, of which 136 were leased to the Erie R. R.
[2] Estimated.
[3] Average in service, number at end of year, 2,031.
[4] Owned 6,504 cars, 14 of which were in local yard service.
[5] In special local service.
[6] Owned 1,656 cars, 23 of which were leased to T. M. Sinclair & Co. (Ltd.).

TABLE 14.—*Operation of refrigerator cars owned by Big Five packers and affiliated companies, 1917.*

Company.	Number of cars owned and operated.	Total car-miles.	Average number of days each car was in actual operation.	Average miles per car per day.
Armour & Co	[1] 4,751	131,887,153	[2] 340	81.6
Pittsburgh Provision & Packing Co. (Armour-Allerton interests)	41	211,544	[2] 260	19.8
Cudahy Packing Co	1,405	42,792,959	292	104.3
Morris & Co	[3] 2,423	64,476,785	[2] 340	78.3
Swift & Co.:				
Libby, McNeill & Libby	60	586,076	325	30.1
Swift Refrigerator Transportation Co	[4] 6,306	149,905,878	309	76.9
Union Meat Co	4	3,744	183	[5] 5.1
Wilson & Co., Inc.:				
T. M. Sinclair & Co. (Ltd.)	132	2,352,453	[2] 340	52.4
Wilson Car Lines	[6] 1,477	36,883,372	292	85.5
Total	16,599	429,099,964	320	80.8

[1] Owned 4,944 cars, 193 of which were leased to the Erie R. R.
[2] Estimated.
[3] Average in service, number at end of year, 2,590.
[4] Owned 6,316 cars, 10 of which were in local yard service.
[5] In special local service.
[6] Owned 1,562 cars, of which 85 were leased to T. M. Sinclair & Co. (Ltd.).

Stability of movement is here the noticeable feature. The 18,052 cars operated in 1914 made an average of 80.3 miles per car per day, while the 16,599 cars in 1917 averaged 80.8 miles. As will be seen later by comparison, 80 miles per day throughout the year represents a very good movement for refrigerator cars even in normal times, yet this rate was maintained by the packers during 1917, a period when a very large volume of freight tonnage was handled under trying circumstances. Terminals were congested and the unloading of cars was therefore delayed. Embargoes and constantly changing priority orders, a shortage of steel, coal, and other materials, and severe storms and cold weather added to the railroads' difficulties in handling

the business offered to them. In the face of all these difficulties the big packers' cars were operated in the usual efficient manner.

The average miles per day for the cars operated by the big packers themselves during 1917 ranged from 76.9 miles for the Swift Refrigerator Transportation Co. to 104.3 miles for The Cudahy Packing Co. The very high rate for the Cudahy cars is in part due to the fact that this company considers that its cars are in actual service only 292 days a year, while the other large companies, with the exception of Wilson & Co., Inc., consider that their cars operate 309 to 340 days per year. As a matter of fact, Armour & Co., Morris & Co., and T. M. Sinclair & Co. (Ltd.) reported to the commission that their cars were in operation 365 days a year. Such a record would be impossible even if the equipment were new. The cars are necessarily in the repair shops a part of the time and it is thought that the estimate of 340 days of service during the year is very liberal. It is impossible to secure accurate figures on the number of days per year a car is in service, for few of the companies keep a record of the number of days each car is in the shops for repairs.

The cars of the small packing companies affiliated with the big packers make less mileage than those of the parent companies. The Union Meat Co., of North Portland, Oreg., shows only 5.1 miles per day for its cars. These cars are used in a very short local run. The cars of the Pittsburgh Provision & Packing Co. make 19.8 miles per day; Libby, McNeill & Libby, 30.1 miles; and T. M. Sinclair & Co. (Ltd.), 52.4 miles.

INDEPENDENT PACKING COMPANIES.

Tables 15 and 16 show the operating results of the cars owned by the independent packing companies for the years 1914 and 1917.

TABLE 15.—*Operation of refrigerator cars owned by independent packing companies, 1914.*

Company.	Number of cars owned and operated.	Total car miles.	Average number of days each car was in actual operation.	Average miles per car per day.
Arbogast & Bastian Co	3			(1)
Beech-Nut Packing Co.[2]	5	98,417	[3] 340	57.9
Carstens Packing Co	3	26,016	312	27.8
Cincinnati Abattoir Co	83	1,586,450	289	66.1
Cleveland Provision Co	93	981,546	321	32.9
Consolidated Dressed Beef Co	10	41,381	[3] 340	12.2
Cudahy Bros. (Milwaukee)	244	4,713,038	268	72.1
Jacob Dold Packing Co	213	4,486,406	313	67.3
Evansville Packing Co	10	126,344	[3] 292	43.3
Wm. Focke's Sons Co	3			(1)
Frye & Co	15	113,955	287	26.5
H. J. Heinz Co.[2]	52	810,043	345	45.2
Houston Packing Co	24	390,405	345	47.2
Independent Packing Co. (Chicago)	100	1,920,964	192	100.1
Indianapolis Abattoir Co	[4] 71	1,457,062	330	62.2
Kingan & Co. (Ltd.)	461	10,660,691	[3] 340	68.0
John Morrell & Co	201	6,839,166	300	113.4
St. Louis Independent Packing Co	150	4,115,130	[3] 340	80.7
F. Schenk & Sons Co	5			(1)
Terry Packing Co	10	66,676	[3] 340	19.6
Western Packing & Provision Co	10	167,865	[3] 340	49.4
Total	1,766	38,601,555	305	72.1

[1] No figures available.
[2] Not slaughterers.
[3] Estimated.
[4] Company owned 104 cars, 33 of which were operated separately and no statistics of operation were furnished.

TABLE 16.—*Operation of refrigerator cars owned by independent packing companies, 1917.*

Company.	Number of cars owned and operated.	Total car miles.	Average number of days each car was in actual operation.	Average miles per car per day.
Arbogast & Bastian Co	3			(1)
Beech-Nut Packing Co.[2]	5	92,404	[3] 340	54.4
Carstens Packing Co	3	26,016	312	27.8
Cincinnati Abattoir Co	100	1,666,975	282	59.1
Cleveland Provision Co	72	588,272	321	25.5
Consolidated Dressed Beef Co	5			(1)
Cudahy Bros. (Milwaukee)	240	3,546,759	281	52.6
Jacob E. Decker & Sons	15	40,567	[4] 60	45.1
Jacob Dold Packing Co	257	3,391,552	313	42.2
Evansville Packing Co	6	98,550	[3] 292	56.3
Wm. Focke's Sons Co	3			(1)
Frye & Co	15	82,650	268	20.6
H. J. Heinz Co.[2]	52	604,887	345	33.7
Houston Packing Co	20	216,318	345	31.4
Independent Packing Co	99	1,715,110	250	69.3
Indianapolis Abattoir Co	[5] 65	1,755,000	330	81.8
Kingan & Co. (Ltd.)	547	9,656,998	[3] 340	51.9
John Morrell & Co	219	5,232,348	300	79.6
St. Louis Independent Packing Co	150	2,928,120	[3] 340	57.4
F. Schenk & Sons Co	5			(1)
Western Packing & Provision Co	10	219,440	[3] 340	64.5
Total	1,891	31,861,907	312	54.5

[1] No figures available.
[2] Not slaughterers.
[3] Estimated.
[4] Began operation Nov. 1, 1917.
[5] Owned 109 cars, 44 of which were operated separately and no operating statistics have been furnished.

The cars of these companies move much more slowly than the cars of the large packers. The cars owned by the Big Five make approximately 80 miles per day; the independent packing companies' cars made 72.1 miles per day in 1914 and but 54.5 miles in 1917. This difference is accounted for in part by the fact that the packers' cars have on the average a longer run than the cars of the small companies. The movements of the Big Five packers' cars are also traced by traffic experts. It can not be concluded, however, that these are the only reasons for the better showing. It may be seen by reference to the foregoing tables that 1,801 of the 1,891 cars operated by the independent packing companies in 1917 were cars of comparatively large companies which ship their products considerable distances and employ competent men to trace them. Even the cars of these companies do not make as good a showing as the cars of the Big Five packers. The better operating results of the latter's cars is probably in part due to their cooperation with and influence upon the railroads in the handling of their equipment.

The effect of blockades of traffic in the year 1917 is clearly shown in the tables on operation of the independent packing companies' cars, which averaged 72.1 miles per day in 1914 and only 54.5 miles in 1917. As previously stated the packers' cars maintained an average of a little more than 80 miles per day in both of those years. This showing gains emphasis from the fact that a large part of the packers' shipments are in trunk line territory in which the congestion of traffic was the greatest in the year 1917. Independent packing companies operating in the same territory suffered considerably from delays in their shipments. Cudahy Bros. of Milwaukee, and the Independent Packing Co., of Chicago, are examples. The cars of the former company made 72.1 miles per day in 1914 and

but 52.6 miles in 1917; the latter company's cars showed an average of 100.1 miles in 1914 and only 69.3 miles in 1917. Kingan & Co. (Ltd.), operating some 547 cars in 1917, was able to maintain an average of only 51.9 miles per car per day, as compared to 68 miles per day in 1914. The 213 cars operated by the Jacob Dold Packing Co. made 67.3 miles per day in 1914 and their 257 cars made but 42.2 miles in 1917, in spite of the addition of 50 new cars which should ordinarily show a greater movement than the old. Other instances need not be cited. The poorer showing of the independent packing companies for the year 1917 is evident.

The argument may be advanced that the packers' efficiency of organization was responsible for the good showing in the operation of their cars in 1917 in spite of the transportation difficulties of that year. The argument has some weight and will not be denied. It is also undoubtedly true, however, that the packers had the cooperation of the traffic managers of the railroads to secure for them the best possible service at that time.

INDEPENDENT PRIVATE CAR COMPANIES.

Tables 17 and 18 show the operating results of the refrigerator cars owned by independent private car companies in 1914 and 1917.

TABLE 17.—*Operation of refrigerator cars owned by independent private car companies, 1914.*

Company.	Number of cars owned.	Number of cars for which operating statistics have been furnished.	Total car miles.	Average number of days each car was in actual operation.	Average miles per car per day.
Anchor Car Co.	4	4	89,626	300	74.7
Atlantic Seaboard Despatch Co.	398	359	8,259,813	[1] 340	67.7
Milwaukee Refrigerator Transit & Car Co.	945	540	14,317,615	[1] 340	78.0
Mather Railway Equipment Co.	851	303	6,720,638	344	64.5
Missouri River Despatch	559	559	8,670,438	345	45.0
Union Refrigerator Transit Co.	2,615	2,615	61,459,271	[1] 340	69.1
Western Heater Despatch Co.	382	None.	....	....	....
Total	5,754	4,380	99,517,401	341	66.6

[1] Estimated.

TABLE 18.—*Operation of refrigerator cars owned by independent private car companies, 1917.*

Company.	Number of cars owned.	Number of cars for which operating statistics have been furnished.	Total car miles.	Average number of days each car was in actual operation.	Average miles per car per day.
Anchor Car Co.	4	4	69,226	300	57.7
Atlantic Seaboard Despatch Co.	310	308	4,732,834	[1] 340	45.2
Federal Refrigerator Despatch Co.	25	25	488,819	272	71.9
Marsh Refrigerator Service Co.[2]	901	630	12,671,727	[1] 340	59.2
Mather Railway Equipment Co.	843	295	5,516,525	342	54.7
Mid-West Despatch Car Co.	226	125	2,518,309	319	63.2
Missouri River Despatch	583	583	10,897,895	345	54.2
Union Refrigerator Transit Co.	3,007	3,007	72,573,343	[1] 340	71.0
Western Heater Despatch Co.	379	None.	....	....	....
Total	6,278	4,977	109,468,678	339	64.9

[1] Estimated. [2] Formerly Milwaukee Refrigerator Transit & Car Co.

Here again it is evident that the cars of these companies made fewer miles per day than the cars of the big packers. The tables show that their cars made but 66.6 miles per day in 1914 and 64.9 miles in 1917, as compared with the 80-mile average of the Big Five packers. The effect of the transportation difficulties of the year 1917 is only slightly noticeable in the statistics for all companies combined but it is clearly apparent in the figures of some of the companies. The cars of the Anchor Car Co. made 74.7 miles per day in 1914 and but 57.7 miles in 1917; the Atlantic Seaboard Despatch, 67.7 miles in 1914 and 45.2 in 1917; the Marsh Refrigerator Service Co., 78 miles in 1914 and 59.2 in 1917; the Mather Railway Equipment Co., 64.5 in 1914 and 54.7 in 1917. The Missouri River Despatch and the Union Refrigerator Transit Co. showed better results in 1917 than in 1914. The Union Refrigerator Transit cars operate largely on western and southern roads. Only a comparatively small percentage of their movement is in trunk line territory, where the congestion was the greatest, and it is therefore not to be expected that they should be materially affected. The Federal and Mid West companies, not included in 1914 statistics, averaged 71.9 miles and 63.2 miles, respectively, in 1917.

Tables 19 and 20 show the operating results of the cars owned by private car companies, the capital stock of which is owned by railroads.

TABLE 19.—*Operation of refrigerator cars owned by private car companies under railroad control, 1914.*

Company.	Number of cars owned and operated.	Total car-miles.	Average number of days each car was in actual operation.	Average miles per car per day.
American Refrigerator Transit Co	5,577	77,710,917	[1] 340	41.0
Chicago, New York & Boston Refrigerator Co	817	14,962,933	332	55.2
Frisco Refrigerator Line	2,500	31,259,182	[1] 340	36.8
Pacific Fruit Express Co	12,977	327,823,043	[1] 340	74.3
Santa Fe Refrigerator Despatch Co	8,950	184,096,306	343	60.0
Total	30,821	635,852,381	341	60.5

[1] Estimated.

TABLE 20.—*Operation of refrigerator cars owned by private car companies under railroad control, 1917.*

Company.	Number of cars owned and operated.	Total car-miles.	Average number of days each car was in actual operation.	Average miles per car per day.
American Refrigerator Transit Co	5,667	91,201,435	[1] 340	47.3
Chicago, New York & Boston Refrigerator Co	776	14,349,705	[1] 340	54.4
Frisco Refrigerator Line	2,500	29,100,780	[1] 340	34.2
Pacific Fruit Express Co	13,883	396,301,574	341	83.5
Santa Fe Refrigerator Despatch Co	9,311	251,140,890	346	78.0
Total	32,137	782,094,384	342	71.2

[1] Estimated.

These cars of railroad-owned companies, enjoying, as they undoubtedly do, every possible efficiency of operation, do not move as fast as the packers' cars. This is accounted for in part by the fact that these cars have a greater loaded movement and a correspondingly less empty movement than the packers' cars. Cars which are loaded for the return movement are somewhat delayed and they can not make so high a daily mileage as the cars of the packers, which are usually returned empty immediately after being unloaded.

The cars of these companies made a greater mileage per day in 1917 than in 1914. This is not as would be expected in view of the congestion of traffic during the year 1917. The railroads evidently were pushing the movement of the cars of their affiliated companies during 1917. It was to the interest of the railroads to get the freight moved as quickly as possible to relieve their lines of congestion; it was to the interest of their affiliated companies to have their cars move as rapidly as possible and thus earn a greater return on investment by collection of more mileage from the carriers over whose lines they were operated. These companies could probably not have shown such good results in 1917, however, if it were not for the fact that a large part of their traffic is in western territory where there was comparatively little congestion. These companies are owned for the most part by western railroads. The Frisco Refrigerator Line is owned by the St. Louis-San Francisco Railway; the Pacific Fruit Express is owned jointly by the Union Pacific and the Southern Pacific; The Santa Fe Refrigerator Despatch Co. by the Atchison, Topeka & Santa Fe; and the American Refrigerator Transit Co. jointly by the Missouri Pacific and the Wabash. The Chicago, New York & Boston Refrigerator Co. is owned by the Grand Trunk and is the only one of these companies owned by an eastern road. Almost all the business of these companies originates in the West and Southwest and is destined to central and eastern markets. The greater part of the haul is west of the Mississippi and the congestion in 1917 was for the most part east of the Mississippi. These companies, therefore, were not greatly disturbed and by increasing their efforts they were able to secure a faster movement for the year 1917 than for 1914.

Two conclusions may be drawn from the study of the operating results of the refrigerator cars of the Big Five packers as compared with those of other companies: First, that the packers' cars make more miles per day over a period of years than the cars of any other class of company; second, that the packers' cars maintain their excellent showing even during periods of unusual congestion of traffic, while other companies, with the exception of railroad-owned companies, suffer greatly at such times from the slow movement of their cars.

OPERATION OF STOCK CARS.

The stock cars owned by the car companies of Swift & Co. and of Wilson & Co., Inc., show a rapid movement in comparison with the cars of other companies. Tables 21 and 22 show the number of stock cars owned and operated by these packers, as well as by Morris & Co., the total car-miles, the average number of days a car

is in actual operation, and the average number of miles per car per day for the years 1914 and 1917.

Table 21.—*Operation of stock cars owned by Morris & Co. and Swift & Co. and affiliated companies, 1914.*

Company.	Number of cars owned and operated.	Total car miles.	Average number of days each car was in actual operation.	Average miles per car per day.
Morris & Co.	[1] 173	1,914,230	[2] 340	32.5
Swift & Co.:				
National Manufacturing Co.	913	30,712,653	286	117.6
Swift Live Stock Transportation Co.	188	4,701,960	230	108.7
Western Live Stock Express Co.	[3] 818	18,742,175	345	66.4
Total	2,092	56,071,018	309	86.7

[1] Average in operation.
[2] Estimated.
[3] Includes 100 cars leased from the Mather Horse & Stock Car Co.

Table 22.—*Operation of stock cars owned by Swift & Co. and Wilson Car Lines and affiliated companies, 1917.*

Company.	Number of cars owned and operated.	Total car miles.	Average number of days each car was in actual operation.	Average miles per car per day.
Swift & Co.:				
National Manufacturing Co.	[1] 1,566	34,682,242	320	72.0
Swift Live Stock Transportation Co.	109	2,575,457	310	76.2
Wilson Car Lines	280	6,663,598	292	81.5
Total	[2] 1,895	43,921,297	315	73.6

[1] Average in service, including for full year the 684 cars taken over from the Western Live Stock Express Co., July 1, 1917.
[2] In addition to these cars Morris & Co. had 10 cars in service part of the year.

It may be noted that the packers' cars made an average of 86.7 miles per day in 1914 and 73.6 miles in 1917. As will be seen later by comparison, this is an extremely good showing for stock cars. The cars of Morris & Co. show a very low mileage in 1914, only 32.5 miles per day. This is probably due to the fact that the cars were being withdrawn from service at that time. The withdrawal was completed in 1917. Morris & Co. operates no stock cars of its own at the present time. The cars of the Swift stock-car companies made a very good record for the year 1914; the National Manufacturing Co. cars averaged 117.6 miles per day; the Swift Live Stock Transportation Co., 108.7 miles; and the Western Live Stock Express Co., 66.4 miles. The National Manufacturing Co. shows but 72 miles per day in 1917. This comparatively poor showing is in part accounted for by the absorption of the Western Live Stock Express Co.'s cars on July 1, 1917. It may be noted from the 1914 figures that these cars had a slower movement in that year than the equipment of the National Manufacturing Co., and it is fair to assume that this also held true for the year 1917. The Swift Live Stock Transportation Co.'s cars made but 76.2 miles per day in 1917 as compared to 108.7 in 1914.

Wilson & Co., Inc., has been using its own stock cars for the past two years. These cars made 81.5 miles per day in 1917, a better record than the cars of the Swift companies.

Tables 23 and 24 show the operating results of stock cars owned by independent private car companies.

TABLE 23.—*Operation of stock cars owned by independent private car companies, 1914.*

Company.	Number of cars owned.	Number of cars for which operating statistics have been furnished.	Total car miles.	Average number of days each car was in actual operation.	Average miles per car per day.
Doud Stock Car Co.	1,413	520	5,323,237	[1] 340	30.1
Mather Horse & Stock Car Co.	8,971	1,144	12,610,484	343	32.1
The Streets Co.	5,832	3,003	24,185,163	[1] 340	23.7
Total	16,216	4,667	42,118,884	341	26.5

[1] Estimated.

TABLE 24.—*Operation of stock cars owned by independent private car companies, 1917.*

Company.	Number of cars owned.	Number of cars for which operating statistics have been furnished.	Total car miles.	Average number of days each car was in actual operation.	Average miles per car per day.
Doud Stock Car Co.	733	448	4,455,848	[1] 340	29.3
Le Ray Despatch Line (Inc.)	113	None.			
Mather Horse & Stock Car Co.	8,217	199	1,905,288	329	29.1
The Streets Co.	4,491	584	3,114,752	[1] 340	15.7
Total	13,554	1,231	9,475,888	338	22.8

[1] Estimated.

These cars make a much poorer showing than those of the packers, only 26.5 miles per day in 1914 as compared with 86.7 miles for the packers; and 22.8 miles in 1917 as compared with 73.6, the average for the packers' cars. The better showing of the packers is not due to a superior operating department. These independent car companies have been operating stock cars for many years, and it is unfair to assume that their experience has not taught them all available methods of furthering the movement of their cars. The better results to the packers is due in part to the longer trips made by their cars. The influence of those companies on the railroads also probably helps to secure for their cars a faster movement.

The cars owned by the Arms Palace Horse Car Co. have not been included in this table. Their equipment is used principally in the transportation of horses and thoroughbred live stock. It is not used, to any extent, in the shipment of ordinary stock to market. Furthermore, a part of this company's equipment is used in passenger service, while the cars of the other companies are all used in freight traffic. The operating results of this company are, therefore, not comparable.

LOADED AND EMPTY MILEAGE.

As previously stated, the packers' cars are usually returned empty to the packing plant after being unloaded at destination. Table 25 shows the percentage of loaded and empty movement of the cars of some of the Big Five packers. The movement is given for certain representative roads in various sections of the country. It is impossible to give a complete tabulation of the loaded and empty mileage over all the railroads, since some of them do not report separately the loaded and empty movement.

TABLE 25.—*Percentage of loaded and empty mileage, 1917.*

Railroad.	Armour & Co.[1]		Swift Live Stock Transportation Co.		Swift Refrigerator Transportation Co.[1]	
	Loaded.	Empty.	Loaded.	Empty.	Loaded.	Empty.
	Per cent.	*Per cent.*	*Per cent.*	*Per cent.*	*Per cent.*	*Per cent.*
Pennsylvania R. R.	50.94	49.06	51.77	48.23	49.93	50.07
Pennsylvania Lines	50.45	49.55	47.71	52.29	50.98	49.02
New York Central	50.40	49.60	51.89	48.11	51.58	48.42
New York, Chicago & St. Louis	51.38	48.62	53.60	46.40	50.31	49.69
Wabash Railway	46.48	53.52	56.27	43.73	54.42	45.58
Louisville & Nashville	55.69	44.31	53.91	46.09	56.53	43.47
Atlantic Coast Line	59.26	40.74	53.17	46.83	51.43	48.57
Atchison, Topeka & Santa Fe	50.58	49.42	86.39	13.61	52.43	47.57
Chicago, Rock Island & Pacific	47.91	52.09	48.70	51.30	55.85	44.15
Chicago & North Western	48.61	51.39	52.78	47.22	52.26	47.74
Chicago, Burlington & Quincy	55.09	44.91	55.58	44.42	53.84	46.16
Chicago, Milwaukee & St. Paul	50.06	49.94	48.07	51.93	50.58	49.42

[1] Refrigerator cars only.

It is evident that the packers' cars are generally returned empty. The table shows that in some cases the empty movement slightly exceeds the loaded. For the most part the loaded mileage is from 50 to 55 per cent of the total. In only one instance does the loaded mileage amount to more than 60 per cent. That was for the stock cars of the Swift Live Stock Transportation Co. over the Atchison, Topeka & Santa Fe. The total movement over this line was only 404 miles and the example is so insignificant that it need not be considered.

RATES OF MILEAGE.

It has already been shown that, previous to October 1, 1917, the western carriers allowed as a general rule 1 cent per mile on refrigerator cars privately owned and the eastern railroads three-fourths cent. The Big Five packers had a larger movement in western territory than most independents and therefore had more mileage at the 1-cent rate. Tables 26 and 27 show the percentage of the mileage of certain of the Big Five packers and certain independents at the various rates per car-mile.

TABLE 26.—*Mileage rates—Percentage of total car-miles at the various rates of mileage—Big Five packers' refrigerator cars, 1917.*

Company.	At 1 cent per mile.	At ¾ cent per mile.	At $\frac{8}{10}$ cent per mile.	Total.
	Per cent.	*Per cent.*	*Per cent.*	*Per cent.*
Armour & Co.	53.3	46.4	0.3	100.0
Cudahy Packing Co.	61.5	38.4	.1	100.0
Morris & Co.	53.9	46.0	.1	100.0
Swift Refrigerator Transportation Co.	56.2	43.3	.5	100.0
Total	55.5	44.2	.3	100.0

TABLE 27.—*Mileage rates—Percentage of total car-miles at the various rates of mileage—Independent packing companies' refrigerator cars, 1917.*

Company.	At 1 cent per mile.	At ¾ cent per mile.	At $\frac{8}{10}$ cent per mile.	Total.
	Per cent.	*Per cent.*	*Per cent.*	*Per cent.*
Cudahy Bros. (Milwaukee)	62.6	37.2	0.2	100.0
Kingan & Co. (Ltd.)	29.3	69.0	1.7	100.0
John Morrell & Co.	51.5	48.5		100.0
Cincinnati Abattoir Co.	21.9	78.1		100.0
Independent Packing Co.	33.9	65.8	.3	100.0
Total	39.8	59.4	.8	100.0

Over 55 per cent of the Big Five packers' mileage was at the higher rate, 1 cent per mile, in 1917, while less than 40 per cent of the mileage of the representative independent packing companies was at this rate. In earlier years the difference was even greater. It is not contended that the railroads so adjusted their mileage rates that the Big Five packers would get the highest rates. Attention is called to the fact simply that the packers did get the largest return; that they received a higher rate per mile, on the average, than the independent companies. They therefore had a slight competitive advantage in this respect. At the present time there is, of course, no such comparison, for a practically universal rate of 1 cent per mile on refrigerator cars was established on October 1, 1917.

CONCLUSIONS.

It is evident from the statistics presented in this chapter that the Big Five packers get more out of the use of their cars than their competitors. Their cars travel faster than the cars of the small companies and therefore earn greater revenue and perform better service for their owners. Their cars are usually returned to the packing plant empty immediately after completing a trip. The cars of the small packers are also supposed to be returned home empty, or at least should not be loaded in a direction away from home, but evidence shows that this rule is often not adhered to, and the small packers often suffer considerable delay in the return of their equipment. The figures on rates of mileage received by packing companies show that the large packers have received, until quite recently, a larger average return per mile than their competitors. In short, the ownership of transportation facilities by the shipper has resulted in advantages to the large packers to the detriment of the small companies.

CHAPTER 3.

FINANCIAL RESULTS OF OPERATION.

INTRODUCTION AND SUMMARY.

A survey has been made of the financial results from the operation of private car lines owned by the Big Five packers for the fiscal years 1912 to 1917, inclusive, and this chapter is devoted to a discussion of the results as reported by these companies. It has been found that the Big Five packers—Armour & Co., Swift & Co., Morris & Co., the Cudahy Packing Co., and Wilson & Co., Inc.—exert a predominant influence over the operation of a certain type of the refrigerator cars used in the meat industry. Of the "brine-tank refrigerator cars" adapted to the shipment of fresh beef and carcass meats, these five companies, as shown in detail elsewhere, owned and operated in 1917 directly or through subsidiary and affiliated companies 91.6 per cent. The independent packing companies owned and operated only 6.8 per cent of such cars, while a few other private car companies owned and operated 1.6 per cent. Of all the "brine-tank refrigerator cars" owned and operated by the packing companies of the country, the Big Five packers owned and operated 93.1 per cent, as against 6.9 per cent owned and operated by the independent packers. Some attention has been given in the latter part of this chapter to the financial results reported by some of the more important independent packing companies which own and operate private cars.

The data presented in this chapter relating to the financial results from the operation of private car lines owned by the packing companies is based almost entirely upon reports submitted by the companies, and no attempt has been made to verify the accuracy of the returns through an investigation of the books and records of the various companies, except in a few instances. A study of the reports as rendered reveals that considerable variance exists in the accounting procedure followed by the different companies in determining the profits or losses shown, and therefore no final conclusion has been reached as to the actual rates of profit realized. There are several reasons for this and the more important ones will be outlined below.

On the basis of corrections which the Commission has made to the figures reported by the various companies and which will be shown when each company is separately discussed, it appears that an average profit of 6.8 per cent on the investment was made in 1912 by the private car lines operated by the Big Five packers. In 1914 the average rate was 3.8 per cent and in 1917 4.6 per cent. For the six years the average rate for all the car lines of the Big Five packers was 5 per cent. The earnings of their refrigerator car lines during the six years averaged 4.8 per cent, and those of their stock car lines, 11.9 per cent.

In each of these years the rate as determined necessarily includes profits from the refrigeration service operated prior to 1915 by the

Armour Car Lines and since that time by the Fruit Growers' Express Inc., because the data at hand did not warrant an attempt to segregate the results of the refrigeration service from the combined results reported by these companies. The results from the operation of the Libby, McNeill & Libby cars and of T. M. Sinclair & Co. (Ltd.) have not been considered, for the reason that no balance sheet was submitted by either of these companies, hence the investment could not be determined. These rates of profit are believed to represent minimum rates, and it is probable that a thorough audit of all of the companies' accounts would materially change the rates.

It is to be noted that the profits realized by the packer refrigerator car lines were made under the three-quarter cent mileage rate almost universally in effect up to October, 1917, since which date the mileage rates have been higher as explained on page 44.

THE EFFECT OF COMPANIES' ACCOUNTING PROCEDURE ON FINANCIAL RESULTS.

Property values.—The values of car equipment reported by the various companies apparently represent in some cases the original cost of the equipment less depreciation; while in other cases they are values after additions to cost have been made through reappraisals. It will be pointed out later that not only do the rates of depreciation vary considerably as between companies, but the basis on which the rates of depreciation have been applied over a long period of years has apparently been on the original cost of the equipment in some cases and on appraisal values in other cases. The value reported for car equipment, which represents usually over 75 per cent of the total investment of the various companies, plays an important part therefore when any attempt is made to measure the profitableness of operation by applying the net income to the investment as stated. Deductions have been made for the additional values added to cost of equipment due to appraisals where it was known appraisals had been made, and these deductions will be pointed out when the particular companies are discussed.

Capital not employed.—Some of the companies apparently have more money than can be used in the ordinary operations of their business of operating private cars. In several cases this money is loaned to the parent company by the operating companies, and the interest received on the loans is included as income from operations. In order that the profitableness of operating the car lines might be judged more satisfactorily the Commission has found it necessary to make adjustments by reducing the assets of those companies which loaned funds not needed in the operation of their business, and by eliminating the interest received and included as income. These deductions will be indicated in detail later.

Repairs and maintenance.—The reported charges for repairs and maintenance of car equipment, which usually amount to about 60 per cent of the operating expense, vary all the way from $66.67 per car to $186.76 per car as between companies for one year. It is true that variations may be expected in the repair and maintenance charges as between companies according to the age of the equipment used, the policy pursued by a company with regard to the upkeep of its equipment, etc., but in many cases it is due to the difference in the account-

ing methods pursued by the company in the grouping of its expense accounts or of charging items to expense which another company would consider as capital charges. The results from operation as finally stated will be seriously affected in a given year according to the policy followed by a company in these matters. No adjustments to the figures of any company have been made for this item, because data were not readily available to establish either the legitimacy or illigitimacy of the charges reported.

Depreciation charges.—Charges for depreciation made by these companies vary all the way from 3 per cent on original cost to 9 per cent on appraised values of car equipment. In view of the fact that the investment in car equipment alone usually represents over 75 per cent of the total investment of each company, and the depreciation charges in many cases approximately 30 per cent of the operating expense, it is evident that such variations in the rate used in figuring depreciation charges and the different basis on which the rates are applied have a very important bearing on the profits shown. Comparison of the results from operation as shown between companies therefore is of little value in determining their relative efficiency or profitableness of operation.

Interest charges.—Most of the companies included interest as an operating charge. In attempting to judge the profitableness of operation on the basis of the investment in the business it was necessary to eliminate these interest charges.

Federal taxes.—Most of the companies also followed the practice of charging Federal income taxes to operating expense. Since these charges represent a tax on net income and therefore have no place in the expenses of operation, adjustments have been made for such charges known to have been made by the individual companies.

POSSIBLE BASES FOR DETERMINING RATES OF PROFIT.

Several methods may be employed for measuring the profitableness of a given business. Looking at the business as a whole and not merely at the owner's interest in it the total investment may be used. In this case the total money employed, regardless of whether subscribed by stockholders, accumulated from earnings, borrowed from banks, or bondholders, becomes the basis. This is usually represented by the total assets of a company after first deducting all current liabilities in the form of accounts payable or accrued items which are immediately due and payable, and which are not interest-bearing obligations of the company. There must also be deducted such money as has been applied in the purchase of outside investments, etc. Intercompany accounts representing money advanced or loaned by the company under consideration to either a parent company, a subsidiary or an affiliated company, should be deducted, and finally any known overvaluations of assets should be excluded.

The resulting figure would be the total investment necessary to conduct a business of that size. The income which should be related to investment calculated on this basis would be before making any charges for any interest either on bonds or loans, or any provision for Federal taxes. Any income received by the company from any of the excluded items mentioned above would also be excluded in determining the net income from operating the business.

Another method may be employed when the corporation as a legal entity is to be considered. In such a case the money actually invested by the stockholders plus accumulated profits not paid out as dividends would be the basis. No money obtained from banks, from bonds or as loans would be considered. This amount which may be called net worth would usually be determined by the addition of the capital stock and surplus accounts, unless some or all of the stock had been issued for more than the actual value of the properties and other assets acquired by the company, and unless the surplus account contained additions due to overvaluation of assets such as might result from appraisals, good will, etc., in which case adjustments would have to be made to determine the stockholders' actual investment. The income figure to be applied against the investment on this basis would be after deduction had been made for interest actually paid for borrowed money, but before any deduction had been made for Federal income taxes.

A third method might be employed which differs only from the second method in that Federal income taxes would be permitted as a deduction from net income. This would be from the viewpoint of the stockholder who desired to know the rate of profit the business had retained on the investment of the stockholders, that is, the net worth of the business.

A fourth method quite commonly employed is to compare the net income after deduction for Federal income taxes with the capital stock issued in order to determine the amount available and the rate of dividends which the company could pay on its stock out of the year's net earnings. Where more than one class of stock had been issued, some of which was limited as to dividends the computation would be made on the basis of the common stock—that is, the class on which dividends were not limited, after deductions of amounts necessary to pay dividends on the preferred stock.

TOTAL INVESTMENT THE BASIS USED.

Owing to the existing differences in the way in which the ownership of the car lines of the Big Five packers is expressed, which renders impossible a fair judgment uniformly for all companies, on any basis except the first method described above, namely, total investment, this basis has been used for estimating the rate of profit earned by each company. Wherever it has been possible to use one of the other methods for determining the rate of profit outlined above, advantage has been taken of the opportunity to show the rate on the other basis as well. From a theoretical point of view an average of the total investment for the year would be the ideal basis to use in computing the rate of profit. In the absence of sufficient data for use in creating such a basis it has been necessary to determine the investment from the figures reported on the balance sheet of each company at the end of each year. In determining the total investment as defined above for the various companies it was necessary to make adjustments to the figures reported. It was also necessary to make adjustments to the income figures for the reasons outlined in this discussion before attempting to determine the rates of profit realized on the total investment. In many cases, however, the data

at hand did not warrant an attempt to make all the adjustments necessary for a conclusion as to the actual rates of profit realized.

After making due allowance for unreliable or deficient accounting methods it is undoubtedly true that profits from car operation are at present much less than at the time of the report on the beef industry by the Bureau of Corporations in 1905. In that report it was estimated that the operation of private cars in the beef industry netted more than 17 per cent on the investment. Statements submitted by the Cudahy Packing Co. showed that its car line made a net return of 22 per cent on the investment in 1902, 20 per cent in 1903, and 17.7 per cent in 1904. Another packer who had formerly been in the refrigerator car business estimated in a statement to the Bureau of Corporations that the net profit from car operation was about 20 per cent on the investment. This statement together with the figures of the Cudahy Packing Co. for the years 1902, 1903, and 1904 indicates that the estimate of the Bureau of Corporations, that profit on cars in the beef industry averaged over 17 per cent, was probably conservative.

Several factors have contributed to a decline in the percentage of return on investment in the past 15 years, chief of which is the constantly increasing cost of maintenance. The cost of repairs, replacements of parts, and the cost of building a new car are very much higher than they were at the time of the report of 1905. Depreciation is consequently also a larger item and overhead expenses have increased slightly. To offset the increased expense there has been no increased revenue until recently [1] except such as might be brought about through expedited movement of cars, thereby increasing the mileage returns.

After this brief dicussion of the general features which affect the financial results reported by private car lines operated by the packing companies, it is possible to take up the companies individually for a closer study. The financial results of the Armour group are presented first. The Swift group, Morris & Co., the Cudahy Packing Co., Wilson & Co. Inc., and some of the more important of the independent companies follow in the order named.

THE ARMOUR GROUP.

The financial results from 1912 to 1917 inclusive, from the operation of the car lines owned by Armour & Co. will be considered in two periods. The first period will cover the years 1912 to 1914, during which time a corporation known as the Armour Car Lines operated all of the cars used in the Armour packing business and the cars used in the transportation of fruits and vegetables, together with the refrigeration service. At the end of the fiscal year 1914 the business formerly done by the Armour Car Lines was divided into two parts and that company was practically dissolved. The cars used in the packing business were separated from the other business, and since that time have been operated as a department of Armour & Co. A new corporation known as the Fruit Growers Express Inc. was organized to operate the cars used in the transportation of fruit and

[1] During the year 1917, the mileage rate for private cars was increased from three-fourths of 1 cent to 1 cent per mile.

vegetables and the refrigeration service. The second period will therefore cover the financial results of the Armour & Co. Car Department and of the Fruit Growers Express Inc. from 1915 to 1917.

Armour Car Lines 1912–1914.—A comparative statement of the assets and liabilities of the Armour Car Lines is given in Table 28 for the fiscal years 1912 to 1914. In Table 29 the income and expenses, together with a profit and loss account representing in the main surplus adjustments for the same period, is shown. The figures in these tables represent the amounts reported by the company, without revision or adjustment.

TABLE 28.—*Comparative statement of assets and liabilities of Armour Car Lines, 1912–1914.*

(Compiled from figures as reported by the company.)

	Nov. 2, 1912.	Nov. 1, 1913.	Oct. 31, 1914.
ASSETS.			
Capital assets:			
Land, buildings, machinery, yards and trucks	$361,107.25	$334,316.78	$296,936.06
Cars	[1] 11,890,490.31	[1] 11,248,351.54	[1] 10,872,298.00
Hooks, racks, T.&M., etc	69,642.56	76,103.46	58,134.67
Total	12,321,240.12	11,658,771.78	11,227,368.73
Current assets:			
Miscellaneous supplies	353,850.10	398,748.02	278,098.50
Accounts receivable	815,261.93	744,593.82	744,256.30
Cash on hand and in banks	10,926.96	8,777.35	44,482.30
Deferred items	27,647.14	17,346.61	
Total	1,207,686.13	1,169,465.80	1,066,837.10
Deficit		351,372.07	438,060.37
Total assets	13,528,926.25	13,179,609.65	12,732,266.20
LIABILITIES.			
Current liabilities:			
Armour & Co. current account	11,442,640.54	12,243,921.37	11,707,633.22
Accounts payable	288,440.67	185,688.28	274,632.98
Total	11,731,081.21	12,429,609.65	11,982,266.20
Capital liabilities:			
Capital stock	750,000.00	750,000.00	750,000.00
Surplus	1,047,845.04		
Total	1,797,845.04	750,000.00	750,000.00
Total liabilities	13,528,926.25	13,179,609.65	12,732,266.20

[1] Book value less depreciation.

TABLE 29.—*Comparative statement of income and profit and loss accounts of Armour Car Lines, 1912–1914.*

(Compiled from figures as reported by the company.)

	Nov. 2, 1912.	Nov. 1, 1913.	Oct. 31, 1914.
INCOME ACCOUNT.			
Earnings:			
Mileage and per diem	$2,490,602.70	$2,675,834.46	$2,567,929.86
Car rental	170,385.43	156,453.04	152,012.87
Demurrage	953.60	2,027.80	4,578.40
Refrigeration	1,548,654.57	1,162,115.76	1,562,653.10
Ice and salt sales	275,784.81	241,686.68	205,067.33
Heater car earnings	30,871.60		
Leased car earnings		18,776.15	13,276.22
Total	4,517,252.71	4,256,893.89	4,505,512.78

TABLE 29.—*Comparative statement of income and profit and loss accounts of Armour Car lines, 1912–1914*—Continued.

	Nov. 2, 1912.	Nov. 1, 1913.	Oct. 31, 1914.
INCOME ACCOUNT—continued.			
Expenses:			
Car repairs including shop expense	$1,062,888.16	$1,422,957.62	$1,336,173.74
General salaries	74,088.91	77,024.52	73,391.27
Refrigeration salaries	131,102.29	124,956.02	125,073.71
Refrigeration expenses	1,038,543.86	715,287.61	982,846.03
Ice house salaries	12,145.23	10,374.79	8,491.09
Ice house expenses	153,444.72	171,822.49	147,121.05
Heater car salaries	6,013.90		
Heater car expenses	33,439.84		
General expenses	24,288.85	27,292.48	30,177.01
Taxes	36,612.61	30,485.23	32,324.70
Insurance cars	6,078.88	4,928.87	4,826.01
Hooks and racks	37,333.40	46,895.40	44,463.84
Car cleaning	30,113.08	28,209.94	27,408.18
Depreciation equipment	1,055,633.82	1,058,259.92	987,308.96
Interest	415,412.18	420,631.29	413,912.90
Total	4,117,139.73	4,139,126.18	4,213,518.49
Net income	400,112.98	117,767.71	291,994.29
PROFIT AND LOSS ACCOUNT.			
Net income	400,112.98	117,767.71	291,994.29
Additions:			
Property sales and adjustment	6.14	1,257.09	
Property fire loss settlement		10,870.57	2,755.21
New car construction	10,000.00	12,500.00	5,000.00
Total	410,119.12	142,395.37	299,749.50
Deductions:			
Dismantled, wrecked and sold cars	92,232.31	486,640.45	369,934.99
Income tax	9,910.22	7,126.99	6,360.75
Property sales and adjustment			10,142.06
Total	102,142.53	493,767.44	386,437.80
Net gain or loss	307,976.59	[1] 351,372.07	[1] 86,688.30

[1] Loss.

According to the figures exhibited in the above table the company's net income from operations amounted to $852,263.99 for the three years 1912 to 1914. After making additions and deductions to this amount as shown in the profit and loss account the net loss for the period was $130,083.78. The net gain shown for 1912 of $307,976.59 was carried to the surplus account, the balance of which is shown as $1,047,845.04 on November 2, 1912. This surplus account was absorbed by the parent company and as a result the net loss shown for 1913 is reported on the balance sheet as a deficit of $351,372.07. In 1914 after showing a net loss of $86,688.30 an accumulated deficit for the two years is reported on October 31, 1914, of $438,060.37.

The Commission made an investigation of some of the items reported by the company and found that the figures as reported did not in its opinion properly represent the true results from operation. Adjustments have therefore been made to the company's figures as shown in Tables 30 and 31.

Among other things the Commission's investigation revealed that the values of cars as reported in the company's balance sheet had been increased on the basis of reappraisals and were not the original cost of the cars. It appeared that two appraisals had been made

by virtue of which $4,401,329.50 had been added to the book value of the cars. It is understood that these appraisals were made on the basis of reproduction costs. The first of these appraisals was made several years prior to 1912, at which time $1,775,000 was added to the book value of the property. In 1912 the car property values were again increased $2,626,099.02. The figures reported as the value of car property in the balance sheet represent the appraisal value less depreciation, whereas in the opinion of the Commission these values should be stated at the original cost less depreciation. The company has kept two sets of records for its car property accounts since putting the appraisal on its books in 1912. One set of records called the "new basis" figures includes the increased values by appraisal, and the other set, apparently used for memorandum purposes only, called the "old basis" figures presents the book value of the equipment in 1912 before the $2,626,099.02 due to the last appraisal was put on the books. To some extent therefore these figures reflect the earlier appraisal but it is probable that the greater part of the values added by the earlier appraisal had been eliminated prior to 1912 through the removal of cars from service each year. In attempting to determine the investment of the Armour Car Lines for the years 1912 to 1914 the Commission has taken into consideration the values added to its car property by appraisal in 1912, and deductions have been made in Table 30 from the total assets reported by the company for the amount of the appraisal values which it is estimated the company's figures contain for each year. The Commission has used the "old basis" figures in determining the amount to deduct from the car property values in 1912, 1913, and 1914. It will be noted that the amount deducted for appraisals as shown in Table 30 decreases each year and this is due to the fact that cars are dismantled, wrecked or sold from year to year, and thus taken out of the property account. The other deductions from total assets are for accounts payable and for the deficit balance included by the company on the asset side of its balance sheet.

TABLE 30.—*Investment of the Armour Car Lines, 1912–1914, as estimated by the Commission.*

	1912	1913	1914
Total assets as reported by company	$13,528,926.25	$13,179,609.65	$12,732,266.20
Deduct:			
Accounts payable	288,440.67	185,688.28	274,632.98
Deficit balance included in assets		351,372.07	438,060.37
Appreciated value due to appraisal	2,296,436.31	1,810,203.54	1,469,769.00
Total deductions	2,584,876.98	2,347,263.89	2,182,462.35
Investment as estimated	10,944,049.27	10,832,345.76	10,549,803.85

In Table 31 the Commission has made adjustments to the "net income" from operations as reported by the company for interest which had been included as an operating expense and also for excess depreciation charged by the company.

Table 31.—*Adjustments to net income figures reported by the Armour Car Lines, 1912–1914.*

Year.	Net income as reported by the company.	Interest included in expenses (see Table 29).	Excess depreciation charged by company.	Net income as adjusted by the Commission.
1912	$400,112.98	$415,412.18	$243,748.71	$1,059,273.87
1913	117,767.71	420,681.29	200,162.05	738,561.05
1914	291,994.29	413,912.90	142,879.64	848,786.83
Total	809,874.98	1,249,956.37	586,790.40	2,646,621.75

The Commission found that the Armour Car Lines had been using a rate of 9 per cent on the depreciated new basis value—i. e., appraisal value less depreciation for its refrigerator car equipment which represented the great bulk of its equipment—and 6 per cent on its gondola, tank and other car equipment. Since depreciation should be based upon the original cost of the property and not on appraisal values a deduction has therefore been made for the excess depreciation charged by the company. The Commission has used the same rates employed by the company, namely, 9 and 6 per cent, respectively, on the refrigerator and on the gondola, tank and other car equipment, but it has applied these rates to the "old basis" values as shown on the memorandum records of the company, to which reference has previously been made in this chapter. The depreciated value of the equipment at the beginning of each year has been used. It should be noted that the "old basis" values represent the book values less depreciation of the equipment in 1912 before the second appraisal was added, but after the first appraisal had been put on its books, by the company. To some extent therefore these values do not reflect the original cost of the equipment due to the additional value added by an appraisal made prior to 1912. The cost of new equipment purchased each year has been added to the "old basis" values of 1912, and allowance has been made for the cars going out of service, the depreciation for the year has then been deducted, so that the depreciation allowed by the Commission is on the values shown at the beginning of each year after allowance for these factors.

It should also be noted that the Swift Refrigerator Transportation Co. reported that a rate of 6 per cent on the depreciated book value of its car equipment of all kinds had been used in figuring its depreciation in 1916 and 1917. This rate it was said had been ordered by the Internal Revenue Department, a rate of 6 per cent on the book value before deduction of depreciation having been previously used. The difference in rates of depreciation used by the Armour Car Lines and by the Swift Refrigeration Transportation Co. must be kept in mind therefore in comparing the results of the companies.

The rate of profit for the Armour Car Lines on the basis of the investment shown in Table 30 and of the adjusted net income from operations as shown in Table 31 was 9.7 per cent in 1912, 6.8 per cent in 1913, and 8 per cent in 1914. The total net profit for the three years as estimated by the Commission was $2,646,621.75, a

yearly average of $882,207.25 or 8.2 per cent on the investment. The profit of $2,646,621.75 for the three years covered the operation of all cars, and the results from refrigeration. As no separate report was made of the results from refrigeration it is impossible to give a separate statement for the results from operation of the cars alone during these years, but it is probable that about one-half of the profits reported were due to the results from refrigeration as this is understood to be very profitable.

The Commission has made no attempt to adjust the items charged by the company to its profit and loss account and which therefore affect the surplus account, as the main object in view has been to judge the income from operations and its relation to the investment of the company. It must be said, however, that the charges for losses on dismantled, wrecked, and sold cars are figured on the basis of the appraised values of the cars instead of their original cost value and that the loss as stated is not an actual loss but somewhat fictitious in character. As a result of this accounting procedure the deficit reported by the company for 1913 and 1914 is therefore not a correct reflection of its actual financial condition. The correct accounting procedure would seem to be that followed by the Swift Refrigerator Transportation Co. which charges losses on dismantled, wrecked and sold cars to the depreciation reserve account.

The method of accounting procedure in regard to the loss on dismantled, wrecked, and sold cars has been the subject of interesting discussion among the packers. The following letter written by F. H. Frederick, of the Swift Refrigerator Transportation Co., to A. R. Fay, of the same firm, suggests that Armour & Co. has adopted the accounting procedure which it now uses for the purpose of being able to show a loss from the operation of its cars. Presumably Armour & Co. desired to show a loss from car operation in order that it might be able to substantiate its claims for a higher rate of mileage from the carriers for the use of its cars. The letter is as follows:

CHICAGO, *August 2, 1916.*

Mr. A. R. FAY, *Office:*

As I wrote you the other day, Armour and Morris are having a discussion among themselves as to what manner they shall present their figures to Mr. Thompson.

Morris has taken such a decided stand against the equally decided stand of Armour that I asked C. H. Swift to talk with Edward Morris about it, and at C. H.'s suggestion we talked the matter over with L. F.[1] and finally, on approval of L. F., C. H. said he would talk with Edward Morris.

The whole discussion arises about showing as a loss that amount that is left in the car property account after depreciation and after deducting therefrom the dismantled or selling price of the car there is still a loss. For illustration, say a car worth $1,000 depreciates $600, leaving in the car property account $400. If the car were dismantled it would be worth, say $175, and that shows a loss of $225, or if you sold it for $300, that shows a loss of $100 *and Armour wants to show this as a loss in their operations, and I guess they have to have it in order to show a loss in the operation of the cars, at least to show a substantial loss,*[2] and Morris does not want to show it.

Our account, the Wilson account, and, I believe, the Cudahy account, would not be affected materially either way, at least, Wilson & Co., and we can show up fairly poor returns with or without this loss, but of course it will be a greater loss if we can figure it in, but each of us can show it as a separate item, and the loss in the operation of the cars will be apparent with or without these particular figures.

---

[1] L. F. Swift.
[2] The italics are the Commission's.

I have left it with Ellis [1] to convince Morris & Co. that they ought to come in on some such scheme. McLaren [2] is in favor of any kind of figures we can get up, but Osman [3] is not convinced, therefore my appeal to C. H.

We hope to have a meeting to-day or to-morrow. F. H. F.[4]

Armour & Co. Car Department, 1915–1917.—As previously stated the Armour Car Lines was practically dissolved in November, 1914. At that time the cars used in the packing business were turned over to Armour & Co., by whom they have since been operated as a car department without a separately incorporated car company. All the money used by the car department is allotted to it by Armour & Co. from its general funds. The company reported for 1917 ownership of 5,199 cars and the operation of 154 cars leased from the Utility Operating & Supply Co., a subsidiary of Armour & Co. Tables 32 and 33 show the assets and liabilities and the income and profit and loss statements arranged in comparative form from the figures as reported by the Armour & Co. Car Department, 1915 to 1917, inclusive, without revision or adjustment. In Table 34 the investment for each of these years as estimated by the Commission is given, while Table 35 exhibits the net income from operations as adjusted by the Commission.

TABLE 32.—*Comparative statement of assets and liabilities of Armour & Co. Car Department, 1915–1917.*

[Compiled from figures as reported by the company.]

	Oct. 30, 1915.	Oct. 28, 1916.	Oct. 27, 1917.
ASSETS.			
Capital assets:			
Lands, buildings, machinery	$204,420.56	$197,247.29	$188,739.29
Car equipment	[5] 4,162,699.00	[5] 3,913,677.00	[5] 4,645,278.00
Equipment	29,103.76	20,590.92	59,188.31
Total	4,396,223.32	4,131,515.21	4,893,205.60
Current assets:			
Inventory of miscellaneous supplies	226,893.11	303,515.45	651,656.20
Accounts receivable	310,972.65	277,036.26	373,147.19
Cash on hand	11,734.96	1,638.82	28,520.24
Sundry inventories	3,497.05	12,959.32	14,603.42
Total	553,097.77	595,149.85	1,067,927.05
Deficit	376,484.24	114,532.31	178,245.20
Total assets	5,325,805.33	4,841,197.37	6,139,377.85
LIABILITIES.			
Current liabilities:			
Armour & Co. account current	5,219,617.07	4,638,572.15	5,730,160.53
Accounts payable	86,743.77	202,625.22	409,217.32
Total	5,306,360.84	4,841,197.37	6,139,377.85
Capital liabilities, South Omaha shop:			
New construction suspense	19,444.49	....	....
Total liabilities	5,325,805.33	4,841,197.37	6,139,377.85

[1] F. W. Ellis, president of Fruit Growers' Express (Inc.).
[2] Manager of transportation department of Morris & Co.
[3] Superintendent of car department of Morris & Co.
[4] F. H. Frederick, assistant to the vice president of Swift Refrigerator Transportation Co.
[5] Book value less depreciation.

TABLE 33.—*Comparative statement of income and profit and loss accounts of Armour & Co., Car Department, 1915–1917.*

(Compiled from figures as reported by the Company.)

	Oct. 30, 1915.	Oct. 28, 1916.	Oct. 27, 1917.
INCOME ACCOUNT.			
Earnings:			
Mileage and per diem	$1,308,979 15	$1,132,717.27	$1,125,065.83
Car rentals	93,931.25	85,571.22	95,807.88
Demurrage	14,024.20	15,478.40	26,127.90
Total	1,416,934.60	1,233,766.89	1,247,001.61
Expenses:			
Car repairs including shop expenses	611,584.51	580,322.66	633,535.14
Salaries	46,678.15	43,314.44	52,038.97
General expenses	36,512 84	37,630.20	30,601.77
Taxes	15,296.00	22,555.54	22,789.06
Insurance cars	2,394.25	2,049.95	2,205.56
Hooks and racks	40,699.59	42,344.06	62,893.87
Car cleaning	24,892 54	25,695.94	36,867.27
Depreciation equipment	410,720.55	356,609.25	351,197.30
Interest	139,161.74	96,961.45	121,552.14
Total	1,327,940.17	1,207,483.49	1,313,681.08
Net income or loss	88,994.43	26,283.40	[1] 66,679.47
PROFIT AND LOSS ACCOUNT.			
Net income or loss	88,994.43	26,283.40	[1] 66,679.47
Additions:			
Property sales and adjustments	7.00	739.75	....
Fruit Growers Express business prior to Nov. 1, 1914.	14,692.14	16,352 35	....
Collections on abandoned accounts	....	....	1.12
New car construction	....	....	17,475.00
Total	103,692.57	43,375 50	[1] 49,203.35
Deductions			
Dismantled, wrecked, and sold cars	480,177.81	154,235.53	119,532.59
Abandoned accounts	....	672.28	....
Income tax	....	3,000.00	3,500.00
Property sales and adjustment	....	....	1,740.37
Fruit Growers Express business prior to Nov. 1, 1914.	....	....	4,268.89
Total	480,177.81	157,907.81	129,041.85
Net loss	376,484.24	114,532.31	178,245.20

[1] Loss.

TABLE 34.—*Investment of Armour & Co. Car Department as estimated by the Commission.*

Year.	Total assets reported by the company.	Deduct for deficit balance included in assets.	Deduct for accounts payable.	Deduct for appreciated value due to appraisal.	Investment as estimated by the Commission.
1915	$5,325,805 33	$376,484.24	$86,743.77	$553,171.00	$4,309,406.32
1916	4,841,197.37	114,532.31	202,625.22	507,817.00	4,016,222.84
1917	6,139,377.85	178,245.20	409,217.32	436,800.00	5,115,115.33

TABLE 35.—*Adjustments to net income figures reported by the Armour & Co. Car Department.*

Year.	Net income as reported by the company.	Interest included in expenses, see Table 33.	Excess depreciation charged to expense.	Net income as adjusted.
1915	$88,994.43	$139,161.74	$37,044.98	$265,201.15
1916	26,283.40	96,961.45	36,004.98	159,249.83
1917	[1] 66,679.47	121,552.14	49,541.00	104,413.67
Total	48,598.36	357,675.33	122,590.96	528,864.65

[1] Loss.

In determining the investment as exhibited in Table 34 adjustment has been made for the net difference between the "new basis" and the "old basis" value of Armour & Co.'s Car Department equipment. An adjustment has also been made for the deficit balance included as an item on the asset side of the balance sheet. Similarly in Table 35 adjustments have been made for excess depreciation charges made to operating expenses which the company had figured on the "new basis" value of equipment instead of on the "old basis" value and also for interest which the company had charged to operating expenses.

By applying the net income as adjusted by the Commission to the investment, which it is estimated the company actually employed, it appears that the rate of profit was 6.1 per cent in 1915, 4 per cent in 1916, and 2 per cent in 1917. The total net income for the three years was $528,864.65, or an average for each year of $176,288.21. This is equal to an average rate of 4 per cent on the investment, which is a much better showing than was made by the Swift Refrigerator Transportation Co. during the same period of time. It is probably due in part to the greater efficiency which the managers of the Armour Car Lines display in expediting the movements of their cars, thus obtaining a greater income per car from mileage.

The large losses shown in the profit and loss statements for dismantled, wrecked, and sold cars are somewhat fictitious in character as these losses result largely from figuring the loss on the basis of the appraisal value of the cars instead of on their original cost value. As these charges do not affect the net income from operations as now handled nor the investment as determined by the Commission, no attempt has been made to restate the final net results shown by the company.

The following statement referring to the profitableness of operating the private car lines of his company was made by J. O. Armour, of Armour & Co., and is found on page 544, Part I, of the Hearings before the Senate Committee on Agriculture and Forestry in January, 1919.

> "Armour & Co. have for the last six years sustained a loss in the operation of their meat cars. For the past 13 years the packing-house cars show an average profit of 0.29 of 1 per cent, and for the past six years they show an average loss of 3.58 per cent. For the year ending November 2, 1918 our meat refrigerator cars lost $395,953.72.
>
> "They are not a profitable investment but are an essential and necessary one in the operation of the business."

It is quite possible that Mr. Armour has been able to deceive himself with respect to the rate of loss which he states his company has experienced in the operation of meat cars, his figures no doubt being based upon the results shown by his accounting records as they have been kept. But, as has been shown, these records do not reflect the true results. The losses which Mr. Armour asserted his company had experienced are transformed into profits when appraisal values are eliminated from the investment, and interest and excess depreciation charges are also eliminated from operating expenses. While the Commission can not agree with Mr. Armour's statements

relative to the profitableness of his investment in the car lines, it does agree, however, with his assertion that the car lines represent an essential and necessary investment in the operation of his business, as it has been conducted in the past and is now being conducted. This is equally true in the case of each of the other four big packers. The car lines have been one of the principal agencies by which the Big Five packers attained and now maintain their monopolistic position in the meat industry.

Fruit Growers Express Inc.—This company was organized in November, 1914, with a capital stock of $500,000, all of which was issued to the Armour family. The capital stock was increased to $1,500,000 about one year later. The company owned 5,660 cars in 1917, which are used in the transportation of fruits and vegetables. It also operates icing stations and furnishes refrigeration service. The figures as submitted do not show the results from the operation of cars separately from other operations. In Tables 36 and 37 are exhibited the assets and liabilities and the income and profit and loss statements arranged in comparative form from the figures reported by the company for the years 1915 to 1917, inclusive.

TABLE 36.—*Comparative statement of assets and liabilities of Fruit Growers Express Inc., 1915–1917.*

(Compiled from figures as reported by the company.)

	Oct. 30, 1915.	Oct. 28, 1916.	Oct. 27, 1917.
ASSETS.			
Capital assets:			
Land, buildings, machinery	$44,487.37	$44,457.29	$35,346.50
Car equipment	[1] 6,054,711.00	[1] 5,367,162.00	[1] 4,749,819.00
Equipment	19,641.26	11,511.95	5,304.85
Total capital assets	6,118,839.63	5,423,131.24	4,790,470.44
Current assets:			
Inventory miscellaneous supplies	64,169.11	65,514.92	76,880.88
Bills receivable	500,000.00		
Accounts receivable	561,159.25	1,819,677.66	2,711,506.73
Stock subscription	1,000,000.00		
New car material purchases			204,476.80
Cash on hand	38,075.36	9,983.26	2,074.83
Sundry inventories	2,694.53	1,421.76	8,457.48
Total current assets	2,166,098.25	1,896,597.60	3,003,396.72
Total assets	8,284,937.88	7,319,728.84	7,793,867.16
LIABILITIES.			
Current liabilities:			
Accounts payable	447,229.52	347,868.08	642,958.93
Bills payable	152,539.24		
Car trust agreement	5,923,223.00	4,848,416.00	4,498,416.00
Total current liabilities	6,522,991.76	5,196,284.08	5,141,274.93
Capital liabilities:			
Capital stock	1,500,000.00	1,500,000.00	1,500,000.00
Surplus	261,946.12	623,444.76	1,152,492.23
Total capital liabilities	1,761,946.12	2,123,444.76	2,652,492.23
Total liabilities	8,284,937.88	7,319,728.84	7,793,867.16

[1] Book value less depreciation.

TABLE 37.—*Comparative statement of income and profit and loss accounts of Fruit Growers Express Inc., 1915–1917.*

(Compiled from figures as reported by the company.)

	Oct. 30, 1915.	Oct. 28, 1916.	Oct. 27, 1917.
INCOME ACCOUNT.			
Earnings:			
Mileage and per diem	$1,259,841.98	$1,315,007.97	$1,418,904.01
Car rentals	49,966.00	31,725.30	61,336.55
Demurrage	7,652.40	18,005.80	9,867.90
Refrigeration	1,385,835.07	1,364,324.29	1,597,252.82
Total	2,703,295.45	2,729,063.36	3,087,361.28
Expenses:			
Car repairs, including shop expense	526,742.96	474,522.66	384,638.56
General salaries	40,000.00	40,000.00	40,000.00
Refrigeration salaries	85,160.83	79,508.99	87,988.02
Refrigeration expenses	835,713.97	798,760.53	979,058.25
General expenses	5,617.86	4,899.09	4,443.39
Taxes	7,370.60	7,178.18	15,802.40
Insurance cars	2,790.62	2,394.73	2,532.80
Rack expense	1,312.11	[1] 807.64	1,925.48
Car cleaning	2,700.90	1,788.72	2,120.37
Depreciation equipment	527,583.80	529,115.89	445,521.98
Interest	302,922.87	207,098.70	140,735.03
Total	2,337,916.52	2,144,459.85	2,104,766.28
Net income	365,378.93	584,603.51	982,595.00
PROFIT AND LOSS ACCOUNT.			
Net income	365,378.93	584,603.51	982,595.00
Additions:			
Property sales and adjustments			4,311.50
New car construction			25.00
Total	365,378.93	584,603.51	[2] 987,131.50
Deductions:			
Dismantled, wrecked, and sold cars	99,945.16	209,835.73	251,805.75
Property sales and adjustments	3,322.89	1,297.72	
Abandoned accounts		594.54	
Total	103,268.05	211,727.99	251,805.75
Net gain	262,110.88	372,875.52	735,125.75
Deductions from net gain:			
Income tax	164.76	11,376.88	31,915.93
Excess-profits tax			172,734.85
Capital-stock tax			1,427.50
Total	164.76	11,376.88	206,078.28
Net surplus	261,946.12	361,498.64	529,047.47

[1] Credit balance. [2] Error in footing of $200 in company's figures as reported.

The same procedure has been necessary as was used for the Armour & Co. Car Department statements in determining the investment and the net income of the company, as the amounts shown in the balance sheet for car property accounts were the "new basis" figures. Similarly the income statements contained interest charges and excess depreciation charges which it was necessary to eliminate. The adjustments made are shown in Tables 38 and 39. It will be noted that in determining the investment, deduction has also been made for intercompany accounts representing money loaned to Armour & Co., which apparently was not used in the business. Deductions have

also been made for two other items in the 1915 balance sheet, designated as "bills receivable" $500,000, and "stock subscription" $1,000,000. These two items represented money owed to the company by the Armour family for the $1,500,000 of capital stock issued to them. The two accounts were settled sometime during the fiscal year 1916, as they do not appear among the assets on the balance sheets of the company subsequent to 1915. Judging from the amount of money loaned to Armour & Co. as shown on the balance sheet for 1917, the Fruit Growers Express Inc. has considerably more money than it can use to advantage in the operation of its car equipment.

In November, 1914, when the Fruit Growers Express Inc. was formed, the company took over from the Armour Car Lines the cars not retained for use in the packing business of Armour & Co. In payment it gave to Armour & Co. car trust certificates amounting to $5,923,223, thus paying for the cars on the basis of the appraised values of 1912. These certificates, part of which fall due each year, bear interest at the rate of 5 per cent. The original cost of the cars was very much less than $5,923,223, and consequently the interest paid by the company each year represents a rate considerably over 5 per cent on their original cost. On October 27, 1917, the company had reduced this indebtedness, as evidenced by its balance sheet, to $4,498,416.

TABLE 38.—*Investment of Fruit Growers Express Inc., as estimated by the Commission, 1915–1917.*

	1915	1916	1917
Total assets as reported	$8,284,937.88	$7,319,728.84	$7,793,867.16
Deductions:			
Accounts payable	447,229.52	347,868.08	642,958.93
Intercompany debit balance	249,000.00	1,424,000.00	2,202,000.00
Appreciated value due to appraisal	630,597.00	523,758.00	405,838.00
Bills receivable	500,000.00		
Stock subscription	1,000,000.00		
Total deductions	2,826,826.52	2,295,626.08	3,250,796.93
Investment as estimated	5,458,111.36	5,024,102.76	4,543,070.23

TABLE 39.—*Adjustments by the Commission to the net income figures as reported by the Fruit Growers Express Inc., 1915–1917.*

Year.	Net income as reported by the company.	Adjustment for interest included in expenses.	Adjustment for excess depreciation charged by company.	Net income as adjusted.
1915	$365,378.93	$302,922.87	$59,726.36	$728,028.16
1916	584,603.51	207,098.70	40,945.63	832,647.84
1917	982,595.00	140,735.03	9,615.62	1,132,945.65
Total	1,932,577.44	650,756.60	110,287.61	2,693,621.65

The rate of profit realized by the company, using the investment as shown in Table 38 as a basis and the adjusted net income exhibited in Table 39, was 13.3 per cent in 1915, 16.5 per cent in 1916, and 24.9 per cent in 1917. The total net income from operations as adjusted for the three years was $2,693,621.65, or an average of $897,873.88 per year, which represents an average rate of 17.9 per cent on the investment.

The rate of profit on the capital stock of the company issued and outstanding at the beginning of each year, which was $500,000 for 1915 and $1,500,000 each year thereafter, and using the net income figures reported by the company, was 73 per cent in 1915, 38.9 per cent in 1916, and 65.5 per cent in 1917. The rate on capital stock was increased to 85 per cent for 1915, 41.7 per cent for 1916, and 66.1 per cent for 1917, when adjustment was made for the excess depreciation charged. In both of these calculations on capital stock interest has been permitted as an expense, as it should be when calculations based upon the capital stock are made. In calculating the rates on capital stock just quoted there was no allowance made for income and excess profits taxes, and therefore these rates would be somewhat lower, particularly in 1917, had such an allowance been made. It is estimated that the rate in 1917 would have been approximately 52 per cent. No attempt was made to compute the rate of profit on the net worth (capital stock plus surplus) as the surplus shown on the balance sheet of the company is not correct, as will be explained later. It is thus seen that the Fruit Growers Express, Inc., has made very good rates of profit during the last three years, and particularly during 1917, when the rate was 24.9 per cent on the investment.

No comment has been made thus far on the items charged to the profit and loss account each year by the Fruit Growers Express, Inc., shown in Table 37. Most of these items apparently represent surplus adjustments, which evidently for bookkeeping purposes the company elects to deduct from the net income from operations each year rather than to charge and credit its surplus account direct. The charges made to profit and loss account for losses on "dismantled, wrecked, and sold cars" warrant comment, inasmuch as they affect the balance sheet figures, as shown by the company. These losses are due mainly to the fact that the company computes the losses shown on the basis of the appraised values of the cars concerned instead of on their original cost. The surplus account as shown by the company therefore is not a correct reflection of its actual financial condition.

In 1917 the loss shown for dismantled, wrecked, and sold cars was $251,805.75, and of this amount $151,996.18 was due to cars sold. When an official of the company was asked why the company had sold its cars at such a loss, he replied that the company had found that the cost of maintaining these particular cars was very high and that they were unprofitable to operate. It was later found that the cars were sold to the Armour & Co. Car Department. If the statement was true that the cost of maintaining the cars was high and that they were unprofitable to operate nothing was gained by transferring them to the Armour & Co. Car Department, owned by the same interests, except that the amount which the company states as net gain for the year 1917 was materially reduced through the transaction.

THE SWIFT GROUP.

Swift & Co. operates its cars through several separately incorporated car companies. The Swift Refrigerator Transportation Co. owns the refrigerator cars as well as various other kinds of equipment used by Swift & Co. in its packing business. The Swift Live Stock Transportation Co. and the National Manufacturing Co. own the stock cars. The Western Live Stock Express Co. also owned and operated a part of the stock cars used by Swift interests previous to June 30, 1917, when its equipment was taken over by the National Manufacturing Co. Libby, McNeill & Libby, a canning company which until 1918 was a subsidiary of Swift & Co., operates its cars as a department of its packing business. These four companies owned a total of 8,540 cars on December 31, 1917, with a reported book value less depreciation of $9,719,086.89. The book value as stated, however, was after $3,444,932.94 had been added by virtue of an appraisal made in December, 1917. The original cost less depreciation would presumably be very much less than the amount reported. Each of these companies will be treated separately.

Swift Refrigerator Transportation Co.—This company, which is a subsidiary of Swift & Co., operates the refrigerator and tank cars used by the parent company in its packing business. It was incorporated under the laws of the State of Maine in 1889 and at the present time the par value of the capital stock issued is $2,500,000. The company reports that all of the present capital stock was sold for cash. During the earlier years of its existence the stock of this company was largely owned by members of the Swift family, but eventually the company was acquired by Swift & Co., which now owns 100 per cent of the stock. The price paid by Swift & Co. for the stock of this company is unknown to the Commission. For some time prior to 1906 the capital stock of this company was $2,000,000, but in that year it was increased to $5,000,000. One-half of the increase of $3,000,000 which occurred at that time was due to a stock dividend and one-half represented cash paid in.

In 1916 one-half of the $5,000,000 capital stock was retired. The present capital of $2,500,000, with the surplus of $6,262,372.61 reported on December 29, 1917, seems quite adequate for the immediate needs of the company. In fact, the company borrows money on its own credit which is loaned to Swift & Co. On December 29, 1917, the company reported loans of this nature amounting to $3,285,500. On that date the company's reports showed that it owned 6,832 cars which represented about 25 per cent of the total number of cars owned and operated in that year by the Big Five packers or their subsidiary companies. On the basis of cars owned and operated the Swift Refrigerator Transportation Co. is the largest of the packers' private car companies, and in view of this fact the results from its operations as reported by the company are of special interest.

Tables 40 and 41 show the balance sheets and income and expense statements for the years 1912 to 1917 inclusive, arranged in comparative form from figures reported by the company, without revision or adjustment.

TABLE 40.—*Comparative statement of assets and liabilities of Swift Refrigerator Transportation Co., 1912–1917.*

[Compiled from figures as reported by the company.]

	Dec. 28, 1912.	Dec. 27, 1913.	Dec. 26, 1914.	Jan. 1, 1916.	Dec. 30, 1916.	Dec. 29, 1917.
ASSETS.						
Car property	$7,296,543.67	$8,555,886.05	$8,166,128.76	$8,398,786.33	$8,426,480.52	$9,828,966.10
Betterments	67,154.12	78,095.55	100,931.87	138,792.80	230,838.96	320,565.41
	7,363,697.79	8,633,981.60	8,267,060.63	8,537,579.13	8,657,319.48	10,149,531.51
Less car property depreciation	1,346,820.67	2,061,696.68	1,972,785.96	4,028,127.84	4,242,179.95	1,721,557.51
	6,016,877.12	6,572,284.92	6,294,274.67	4,509,451.29	4,415,139.53	8,427,974.00
Office furniture	64.50	87.22	50.00			
National Live Stock Bank	6,250.13	6,250.13	6,250.13	6,250.13	6,250.13	6,250.13
Material account				2,662.90	2,394.85	1,704.10
Unearned interest	11,727.34	26,150.25	21,990.88	11,908.13	33,829.25	52,731.28
Swift & Co. loan account	986,000.00	1,585,000.00	1,585,500.00	1,403,000.00	2,455.500.00	3,285,500.00
Accounts receivable:						
Swift & Co	265,167.98		583,482.65	2,655,323.02	816,951.59	
Sundry railroads	391,235.75	376,585.77	307,285.03	261,275.89	260,749.81	278,662.11
	7,677,322.82	8,566,358.29	8,798,833.36	8,849,871.36	7,990,815.16	12,052,821.62
LIABILITIES.						
Capital stock	5,000,000.00	5,000,000.00	5,000,000.00	5,000,000.00	2,500,000.00	2,500,000.00
Bills payable	986,000.00	1,585,000.00	1,585,500.00	1,403,000.00	2,455,500.00	3,285,500.00
Surplus	1,691,322.82	1,957,882.45	2,213,333.36	2,446,871.36	3,035,315.16	6,262,372.61
Swift & Co		23,475.84				4,949.01
	7,677,322.82	8,566,358.29	8,798,833.36	8,849,871.36	7,990,815.16	12,052,821.62

TABLE 41.—*Comparative statement of profit and loss of Swift Refrigerator Transportation Co., 1912–1917.*

[Compiled from figures as reported by the company.]

	1912	1913	1914	1915	1916	1917
EARNINGS.						
Mileage	$1,349,194.28	$1,424,118.31	$1,295,629.65	$1,408,379.25	$1,380,068.07	$1,351,151.89
Rentals	112,959.54	89,526.06	40,313.95	41,107.68	72,977.13	118,713.73
Refrigeration		18,453.00	16,307.13			
Interest				1,884.33	1,592.01	2,778.96
From sale of cars					246.06	
Total earnings	1,462,153.82	1,532,097.37	1,352,250.73	1,451,371.26	1,454,883.27	1,472,644.58
EXPENSES.						
Depreciation	471,949.96	508,241.62	526,214.35	503,133.27	270,137.08	312,492.47
Repairs	811,251.80	1,139,236.97	938,362.59	975,971.39	1,070,960.94	1,277,661.43
Rents	20,827.36	21,943.64	27,322.07	50,781.31	47,583.10	64,507.58
Interest	3,347.31	508.26	7,679.56			
Insurance and taxes	14,807.64	22,836.64	23,843.90	32,485.72	23,698.16	48,157.66
Pay roll	30,257.61	33,140.73	35,830.70	36,674.73	38,967.44	48,944.44
Traveling	5,767.90	3,469.09	3,731.52	1,257.31	2,278.70	3,113.90
Stationery, telephone, telegraph, etc	4,973.48	6,742.31	6,960.11	5,877.11	6,898.01	12,669.94
Handling hooks, racks, etc	3,360.57	10,441.65	12,766.25	2,901.19	350.72	324.89
Icing expense	21,089.22	14,471.57	9,488.58	920.56	94.67	
Car tracing	4,064.19	4,097.79	4,370.20	3,837.43	4,233.67	5,616.71
Cleaning cars		68.60				
Refrigeration adjustment				348.13		
Bad debts				2,211.42		
Miscellaneous	984.93	338.87	229.99	1,433.69	1,236.98	1,399.09
Total expenses	1,392,681.97	1,765,537.74	1,596,799.82	1,617,833.26	1,466,439.47	1,774,888.11
Net operating gain or Loss	[1] 69,471.95	[2] 233,440.37	[2] 244,549.09	[2] 166,462.00	[2] 11,556.20	[2] 302,243.53
Rental paid by Swift & Co	220,000.00	500,000.00	500,000.00	400,000.00	600,000.00	700,000.00
Total net gain	[3] 289,471.85	266,559.63	255,450.91	233,538.00	588,443.80	397,756.47

[1] Gain. [2] Loss. [3] Error of 10 cents in figures as reported.

As shown by the above table, the company experienced a "net operating loss" in each year of the six-year period under review except in 1912 when a small "net operating gain" of $69,471.85 was shown which was equal to about 1 per cent on the investment of that year. In Table 43 the Commission has made adjustments to the "net operating gain or loss" reported by the company for interest and income taxes included as expenses and for interest included as income. These adjustments which are of minor importance, do not materially affect the results as shown by the company and were made for the purpose of maintaining uniformity in the treatment of the reports in this chapter. During the six-year period Swift & Co. paid to this company rentals as shown in Table 41 amounting to $2,920,000 in yearly amounts ranging from $220,000 in 1912 to $700,000 in 1917 and as a result of these payments the company carried to its surplus account a net gain each year. In its statement of earnings from operations the company did not include the rentals paid to it by Swift & Co. but added the amounts so received to the result from operations as exhibited in Table 41, and with this procedure the Commission is in accord as these amounts can not be considered as income from operations. The explanation advanced by the company as justification for these payments was that this was an "allowance for rental by Swift & Co. by reason of mileage being insufficient to cover cost of operation." The effect of these payments, however, was to increase the transportation company's profits and correspondingly to reduce Swift & Co's. profits. None of the other packers report payments of this kind by them to their private car line companies.

In 1915 Swift & Co. also gave this company $1,673,983.13, which amount was added to its depreciation reserve account, thus decreasing the net value of the car property by the same amount. The reason advanced for this gift on the part of the parent company to its subsidiary was that this amount represented an "allowance by Swift & Co. for depreciation estimated to have occurred in car property and not compensated for by earnings." In December, 1917, about two years later, the subsidiary company wrote up the value of its car property $2,817,558.88. This was accomplished by deducting this amount from its depreciation reserve account and crediting surplus account with it. In explanation of this accounting procedure it was stated that the increase in values brought about in 1917 was due to an appraisal made during that year. It is clear that the $2,817,558.88 added by appraisal to the value of the car property in 1917 not only restored the reduction of $1,673,983.13 in the value of the car property which in 1915 it was presumed had occurred but in addition also added $1,143,575.75 to the value of the car property. The subsidiary company, however, did not return to Swift & Co. the $1,673,983 which it had been given in 1915 as compensation for alleged losses in value to its equipment by virtue of depreciation not compensated for by earnings. As the transaction now stands the effect of the payment of $1,673,983.13 by Swift & Co. in 1915 to this company was simply to reduce the profits of Swift & Co. for that year by this amount.

In determining the regular yearly charges for depreciation prior to 1916, the company used a rate of 6 per cent on the book value of its car property—that is, the value before deduction of the depreciation

reserve account. During 1916 and 1917, however, the rate used was 6 per cent on the depreciated value of the car property—that is, the book value of its car property less the depreciation reserve account. The reason advanced for the change was that the Internal Revenue Department had ordered the company to use the new rate. According to the company's reports, the charges per car for depreciation were $71.65 in 1914, $71.65 in 1915, $40.03 per car in 1916 and $45.68 per car in 1917. This change in accounting procedure should be taken into consideration in reviewing the results of the years prior to 1916 and thereafter, as depreciation charges represented from 28.7 to 34 per cent of the total expense charges prior to 1916 and about 18 per cent during 1916 and 1917. Judging from the amounts charged to operating expenses for depreciation in 1916 and 1917 the losses reported for the years 1913, 1914, and 1915 would have been eliminated in those years had the same rate of depreciation been used then as was used in 1916 and 1917.

Following the procedure laid down for determining the investment of the company the figures shown in Table 42 are given. It will be noted that the company loaned to Swift & Co. amounts ranging from $1,251,167.98 in 1912 to $4,058,323.02 in 1916 which are deducted from the total assets reported by the company. The balance sheets submitted did not show any amounts for accounts payable for any of the years under review.

TABLE 42.—*Investment of the Swift Refrigerator Transportation Co., 1912–1917.*

(As estimated by the Commission.)

Year.	Total assets as reported.	Less amount due from Swift & Co., as reported.	Adjustments for depreciation and appraisal.	Investment as estimated by the Commission.
1912	$7,677,322.82	$1,251,167.98		$6,426,154.84
1913	8,566,358.29	1,585,000.00		6,981,358.29
1914	8,798,833.36	2,168,982.65		6,629,850.71
1915	8,849,871.36	4,058,323.02	[1] $1,673,983.13	6,465,531.47
1916	7,990,815.16	3,272,451.59	[1] 1,673,983.13	6,392,346.70
1917	12,052,821.62	3,285,500.00	[2] 1,143,575.75	7,623,745.87

[1] Amount of extra depreciation written off from book value of equipment in 1915 which the Commission believes was not a legitimate deduction in view of the appraisal of 1917 which added $2,817,558.88 to the net book value of the equipment.
[2] Net difference between extra depreciation deducted in 1915 and value added by 1917 appraisal.

In view of the large deduction from the book value of the car property in the form of extra depreciation of $1,673,983.13 in 1915 and of the increase in car property values of $2,817,558.88 as a result of the appraisal in 1917, it is obvious that the total assets as reported for these two years and for 1916 do not represent the true values of the car properties. An adjustment has been made as shown in Table 42 for the extra depreciation of $1,673,983.13 deducted by the company in 1915, as it is believed that this amount was deducted for the purpose of reducing the actual earnings of the parent company (Swift & Co.) in that year as explained on page 121. The same correction was made for 1916. In 1917 when an appraisal of the car equipment was made by the company, $2,817,558.88 was added to the net book value of the equipment, thus restoring the amount deducted in 1915, and $1,143,575.75 in addition. As the appraisal

was presumably made on the basis of reproduction costs of the equipment this latter amount has been deducted from the values reported for 1917.

It has already been pointed out that a change in the method of figuring depreciation was made in 1916. If the rate used in 1916 and 1917 is the correct rate, then the deductions for depreciation in the years 1912 to 1915 have been excessive, and the car property values for each of these years would have to be increased by the amount of excess depreciation written off during these years, and the operating gain or loss similarly corrected for the excess depreciation charged to expenses. Also in 1916 and 1917 when depreciation was figured at a rate of 6 per cent on the depreciated value of the equipment, after the deduction of $1,673,983.13, the depreciation charges would be too low. In the absence of sufficient data no attempt has been made to correct the equipment values for excessive or insufficient depreciation charges except as shown in Table 42. For the same reason no attempt has been made to adjust the net operating gain or loss reported by the company for such excessive or insufficient depreciation as may have been charged. The only adjustments made by the Commission to the amounts of operating gain or loss reported by the company are shown in the following table:

TABLE 43.—*Adjustments by the Commission to the net income figures reported by the Swift Refrigerator Transportation Co., 1912–1917.*

Year.	Net loss from operations reported by company.	Adjustment for interest included in operating income.	Adjustment for interest deducted as operating expense.	Adjustment for income taxes deducted as operating expense.	Net loss from operations as adjusted.
1912	[1] $69,471.85		$3,347.31		[1] $72,819.16
1913	233,440.37		508.26		232,932.11
1914	244,549.09		7,679.56	$2,665.60	234,203.93
1915	166,462.00	$1,884.33		2,554.51	165,791.82
1916	11,556.20	1,592.01		5,558.02	7,590.19
1917	302,243.53	2,778.96		11,768.88	293,253.61
Total for six years	888,779.34	6,255.30	11,535.13	22,547.01	860,952.50

[1] Gain.

Comparison of the investment figures exhibited in Table 42 with the net earnings from operations as adjusted by the Commission in Table 43 gives the following rates of loss or gain from operations: For 1912 a gain of 1.1 per cent, and losses for each year thereafter at the rate of 3.3 per cent in 1913, 3.5 per cent in 1914, 2.5 per cent in 1915, 0.1 per cent in 1916, and 3.8 per cent in 1917. The total net loss from operations as adjusted by the Commission for the six years amounted to $860,952.50, or an average loss of $143,492.06 per year, equal to a rate of 2.1 per cent loss on the investment. It must be remembered however that the company showed a gain each year which was carried to its surplus account due to the rentals paid to it by Swift & Co. These rentals have not been considered as income by the Commission in computing the rates of loss just shown.

When it is considered that all of the car lines operated by the other four big packers, which are comparable with the Swift Refrigerator Transportation Co., showed an average gain for the six-

year period ranging from 3 per cent to 7 per cent on the investment, the reason for the average loss of 2.1 per cent per year reported by the Swift Refrigerator Transportation Co., the largest of the private car line companies operated by any one of the Big Five packers, is difficult to understand. It may be explained in part by the fact that most of the other companies operated by the big packers reported higher earnings per car from mileage than was shown by this company. It may also be due in part to the higher repair charges per car which were reported by the Swift Refrigerator Transportation Co. In 1917 the repair charges were nearly $60 per car higher than those shown on the reports of some of the other big packers. It is impossible to say whether the higher repair charges are due entirely to a difference in the accounting methods employed, to the difference in the age of the equipment used, or to the policy pursued in the upkeep of its car property.

Swift Live Stock Transportation Co.—This company owned 109 stock cars on December 31, 1917. It also operated 321 leased cars during that year. Tables 44 and 45 show the balance sheets and income and expense statements arranged in comparative form from figures reported by the company for the fiscal years 1912 to 1917, inclusive. Table 47 also shows the adjustments made by the Commission to the figures for net earnings reported by the company. These adjustments consist of charges for income taxes included in the expenses by the company and for interest received by the company for money which it had loaned to Swift & Co. Table 46 shows the investment of the company after deductions were made from the total assets for accounts payable and for money loaned to Swift & Co. The Commission has also deducted $53,595.26 from the assets of 1917, as this represented the amount added in that year to the book value of the car property by virtue of an appraisal which was made.

TABLE 44.—*Comparative statement of assets and liabilities of Swift Live Stock Transportation Co., 1912–1917.*

(Compiled from figures as reported by the company.)

	Dec. 28, 1912.	Dec. 27, 1913.	Dec. 26, 1914.	Jan. 1, 1916.	Dec. 30, 1916.	Dec. 29, 1917.
ASSETS.						
Car property	$82,178.62	$78,467.76	$74,510.72	$65,547.64	$60,638.52	$75,287.96
Betterments	57.08	67.58	343.78	350.78	351.78	3,524.04
	82,235.70	78,535.34	74,854.50	65,898.42	60,990.30	78,812.00
Less car property depreciation	45,531.47	47,319.17	41,381.65	37,831.34	35,926.23	....
	36,704.23	31,216.17	33,472.85	28,067.08	25,064.07	78,812.00
Accounts receivable:						
Swift & Co.	215,459.89	258,041.96	310,503.83	365,280.82	209,572.01	225,535.29
Swift & Co. loan account	2,500.00	....	....	25,000.00	....	....
Sundry railroads	....	....	10,592.48	9,177.11	8,295.70	12,266.93
Unearned interest	13.47	....	....	166.43	....	....
	254,677.59	289,258.13	354,569.16	427,691.44	242,931.78	316,614.22
LIABILITIES.						
Capital stock	200,000.00	200,000.00	200,000.00	200,000.00	50,000.00	50,000.00
Surplus	51,492.25	53,437.97	154,569.16	202,691.44	192,931.78	266,614.22
Bills payable	2,500.00	....	....	25,000.00	....	....
Accounts payable	685.34	35,820.16	....	....	....	....
	254,677.59	289,258.13	354,569.16	427,691.44	242,931.78	316,614.22

TABLE 45.—*Comparative statement of income and expenses of Swift Live Stock Transportation Co., 1912–1917.*

(Compiled from figures as reported by the company.)

	1912	1913	1914	1915	1916	1917
GROSS EARNINGS.						
Mileage	$49,103.39	$105,763.18	$93,658.40	$86,857.57	$81,365.31	$67,206.81
Interest	12,178.72	14,307.97	17,363.86	21,387.13	12,414.37	13,272.55
Rental	21,501.18	656.10	700.00	....	....	....
	82,783.29	120,727.25	111,722.26	108,244.70	93,779.68	80,479.36
EXPENSE.						
Repairs	24,161.25	22,216.80	19,487.81	14,176.72	11,282.13	16,419.08
Depreciation	3,493.48	2,725.64	2,358.36	2,424.73	1,756.50	1,573.90
Rent	1,230.95	1,229.28	1,029.62	1,297.63	1,155.53	1,471.72
Pay roll	4,415.43	3,673.62	3,405.88	3,656.93	3,961.65	4,853.74
Office administration	268.01	34.13	71.36	36.73	117.48	80.15
Insurance and taxes	277.80	346.12	331.85	1,317.76	786.61	1,342.18
Rental of cars	15,422.10	34,564.23	31,666.32	34,560.00	31,643.11	33,059.18
Cleaning cars	....	....	88.89	11.47	27.52	11.14
Miscellaneous	....	61.00	425.59	497.59	123.19	1.00
Total	49,269.02	64,850.82	58,865.68	57,979.56	50,852.72	58,822.09
Net earnings	33,514.27	55,876.43	52,856.58	50,265.14	42,926.96	21,657.27

TABLE 46.—*Investment of the Swift Live Stock Transportation Co., as estimated by the Commission, 1912–1917.*

Year.	Total assets as reported.	Deduct accounts payable.	Deduct for intercompany account.	Deduct for appraisal	Investment as estimated by the Commission.
1912	$254,677.59	$685.34	$217,959.89	....	$36,032.36
1913	289,258.13	[1] 21,626.14	[2] 229,653.91	....	37,978.08
1914	354,569.16	....	310,503.83	....	44,065.33
1915	427,691.44	....	390,280.82	....	37,410.62
1916	242,931.78	....	209,572.01	....	33,359.77
1917	316,614.22	....	225,535.29	$53,595.26	37,483.67

[1] Amount shown on balance sheet was $35,820.16, but part of this was evidently an intercompany credit balance.
[2] Estimated amount after allowance is made for intercompany credit balance.

TABLE 47.—*Adjustments by the Commission to the net income figures as reported by Swift Live Stock Transportation Co., 1912–1917.*

Year.	Net income as reported.	Adjustment for interest included as income	Adjustment for income taxes included in expenses.	Net income as adjusted.
1912	$33,514.27	$12,178.72	....	$21,335.55
1913	55,876.43	14,307.97	....	41,568.46
1914	52,856.58	17,363.86	$159.46	35,652.18
1915	50,265.14	21,387.13	1,011.31	29,889.32
1916	42,926.96	12,414.37	558.54	31,071.13
1917	21,657.27	13,272.55	804.80	9,189.52
Total	257,096.65	90,924.60	2,534.11	168,706.16

Comparison of the investment as given in Table 46 with the adjusted net earnings as exhibited in Table 47 shows that this company's rate of profit was 59.2 per cent in 1912, 109.45 per cent in 1913, 80.9 per cent in 1914, 79.9 per cent in 1915, 93.1 per cent

in 1916, and 24.5 per cent in 1917. The net earnings from operations as adjusted in Table 47 for the six years amounted to $168,706.16, an average of $28,117.69 for each year. This gives an average rate of 74.5 per cent on the investment. The comparatively low rate of profit for 1917 may be accounted for in part by the increased charges for car repairs, and by a reduction in income from mileage due to a slower movement of the cars during that year. The company reported repair charges of $75.72 per car for 1916 and $150.63 per car for 1917. A rate of 6 per cent was used in figuring depreciation in 1916 and 1917, the rate previously used having been 8 per cent. The profits for the years prior to 1916 would be increased if adjustments were made to bring the charges for depreciation in line. This company is the most profitable of any of the car line companies owned or controlled by the Big Five Packers.

The company paid 7 per cent dividends in 1912 and 1913 and a dividend of 100 per cent in 1916. The total dividends for the five years amounted to $228,000, or 114 per cent on its capital stock. In 1916 the capital stock was decreased from $200,000 to $50,000 and surplus account was credited with $150,000, the amount of the reduction in capital. It is evident from a study of Table 46, where the investment is given, that the company had been overcapitalized for a number of years and having no use for the greater part of its funds in its own business had loaned them to Swift & Co.

National Manufacturing Co.—Swift & Co. owns 55 per cent of the stock of this company, the balance being owned by New England slaughtering companies controlled by Swift interests. This company owns and operates most of the stock cars which are shown in Table 1, chapter 1 of Part II of this report as controlled by the Swift interests. The National Manufacturing Co. owned the stock of the Western Live Stock Express Co. until 1917. During that year the Western Live Stock Express Co. was dissolved and the National Manufacturing Co. took over all of its equipment. The reports of the company show that it owned 1,581 cars and operated 116 leased cars in 1917.

Table 48 gives a comparative statement of the assets and liabilities of the National Manufacturing Co. for the years 1912 to 1917 as reported by the company. The figures for the year 1917 reflect the increase in assets which was brought about by the dissolution of the Western Live Stock Express Co. During the same year, however, an appraisal was made of the car properties formerly owned by these two companies, and $573,778.80 was added and included in the value of car property shown for 1917 of $1,106,631. In determining the investment of the National Manufacturing Co. for 1917 the amount added by appraisal has been eliminated by the Commission, as shown in Table 50, as it is understood that the appraisal values were based upon reproduction costs.

TABLE 48.—*Comparative statement of assets and liabilities of National Manufacturing Co., 1912–1917.*

(Compiled from figures as reported by the company.)

	Dec. 28, 1912.	Dec. 27, 1913.	Dec. 26, 1914.	Dec. 31, 1915.	Dec. 30, 1916.	Dec. 29, 1917.
ASSETS.						
Car property	$593,758.58	$586,567.08	$569,207.35	$562,213.46	$549,361.09	$962,867.76
Betterments	228.32	315.56	18,709.04	28,602.25	29,998.72	143,763.24
	593,986.90	586,882.64	587,916.39	590,815.71	579,359.81	1,106,631.00
Less depreciation	285,173.02	309,621.03	396,524.79	394,738.28	396,974.62	....
	308,813.88	277,261.61	191,391.60	196,077.43	182,385.19	1,106,631.00
Investment Western Live Stock Express	275,000.00	275,000.00	275,000.00	275,000.00	275,000.00	....
Accounts receivable	403,263.58	511,405.93	555,257.31	145,919.92	84,569.58	87,562.15
Total assets	987,077.46	1,063,667.54	1,021,648.91	616,997.35	541,954.77	1,194,193.15
LIABILITIES.						
Accounts payable	46,096.60	95,215.88	106,265.08	97,183.54	44,649.49	....
Capital	450,000.00	450,000.00	450,000.00	450,000.00	450,000.00	450,000.00
Surplus	490,980.86	518,451.66	465,383.83	69,813.81	47,305.28	744,193.15
Total liabilities	987,077.46	1,063,667.54	1,021,648.91	616,997.35	541,954.77	1,194,193.15

In Table 49 is given a comparative statement of income and expenses for the years 1912 to 1917 as reported by the company. After presenting these figures the Commission has made adjustments, as shown in Table 51, to determine the actual results from operations.

TABLE 49.—*Comparative statement of earnings and expenses of National Manufacturing Co., 1912–1917.*

(Compiled from figures as reported by the company.)

	1912	1913	1914	1915	1916	1917
EARNINGS.						
Mileage	$185,538.00	$203,977.92	$188,927.82	$174,573.52	$171,128.55	$191,008.75
Interest	17,833.27	22,080.39	23,147.79	23,024.98	1,691.07	796.30
Rental	....	....	....	....	....	277.21
Miscellaneous	....	....	....	824.24	....	....
Total earnings	203,371.27	226,058.31	212,075.11	198,422.74	172,819.62	192,082.26
EXPENSES.						
Repairs	87,516.08	121,739.51	72,625.70	73,125.24	55,489.20	122,814.77
Depreciation	34,059.41	29,981.45	28,059.04	19,345.91	11,491.90	22,337.34
Rent	3,116.57	3,113.24	3,630.31	7,170.91	6,621.25	8,986.59
Car rental	....	....	....	....	5,551.67	5,509.85
Insurance and taxes	1,756.18	1,848.54	1,768.89	1,934.67	2,586.74	4,259.99
Pay roll	2,860.99	3,422.36	3,683.73	3,860.86	4,179.13	5,274.14
Office expense	1,672.27	1,141.47	540.58	664.19	507.69	1,196.22
Traveling expense	172.16	104.57	80.10	75.21	66.48	214.86
Tracing cars	1,018.61	1,038.37	1,659.59	1,801.96	1,832.49	2,242.66
Cleaning cars	24.99	88.50	100.21	13.81	1.60	....
Freight	16.38	....	....	....	....	....
Switching	....	109.50	....	....	....	....
Total expenses	132,213.64	162,587.51	112,148.15	107,992.76	88,328.15	172,836.42
Net operating gain	71,157.63	63,470.80	99,926.96	90,429.98	84,491.47	19,245.84

In Table 50 the Commission has endeavored to determine the investment—that is, the capital actually employed by the National Manufacturing Co. in the operation of its cars. It is known that the item of "accounts receivable" shown on the balance sheet of the company consists in large part of money loaned to Swift & Co., which was not used, therefore, in the operations of the business of the National Manufacturing Co. The exact amount of this loan was not shown separately by the company in its reports and the Commission has therefore found it necessary to estimate the amount by capitalizing the interest which the National Manufacturing Co. received, as shown in its income figures each year. A rate of 6 per cent has been used where this procedure was followed for the years 1912 to 1914, and the table shows the amounts deducted by the Commission during these years. During 1915 the National Manufacturing Co. reduced its surplus account $486,000 by virtue of dividends paid to the parent company. Through the credit to the parent company of these dividends the amount loaned to it by this company and included on the balance sheet as an account receivable was reduced by a like amount. As a result of the payment of this large dividend (amounting to 108 per cent of its capital stock) the assets at the end of the year 1915 did not reflect the average condition of the company throughout the year, consequently the Commission made no deduction from the assets for intercompany balances as in previous years. The interest received during 1916 and 1917 was of such small amount that it was not considered necessary to capitalize the amounts for the purpose of determining the deduction to be made for intercompany balances. The investment of the company for these last three years as determined by the Commission is therefore somewhat higher than the capital actually employed in the business for operating purposes. The table shows a deduction of $275,000 for each of the years from 1912 to 1916 inclusive, representing the investment of the National Manufacturing Co. in the stock of the Western Live Stock Co. This deduction was made in determining the investment because it represented money, as in the case of money loaned to Swift & Co., not used in the operation of its business. The income statements do not include any return on this investment as stated, and the investment as determined by the Commission is therefore comparable with the net gain from operations as adjusted.

TABLE 50.—*Investment of the National Manufacturing Co., as estimated by the Commission, 1912–1917.*

Year.	Total assets as reported.	Deduct accounts payable.	Intercompany accounts (debit balances as estimated).	Investment in Western Live Stock Express Co.	Adjustment for values added by appraisal of car property.	Investment as estimated by Commission.
1912	$987,077.46	$46,096.60	$297,221.16	$275,000.00		$368,759.70
1913	1,063,667.54	95,215.88	368,006.83	275,000.00		325,444.83
1914	1,021,648.91	106,265.08	385,796.50	275,000.00		254,587.33
1915	616,997.35	97,183.54		275,000.00		244,813.81
1916	541,954.77	44,649.49		275,000.00		222,305.28
1917	1,194,193.15				$573,778.80	620,414.35

TABLE 51.—*Adjustments by the Commission to the net-income figures as reported by the National Manufacturing Co., 1912–1917.*

Year.	Net operating gain, as reported.	Deduct interest included in income.	Adjustment for income tax.	Net operating profit, as adjusted.
1912	$71,157.63	$17,833.27		$53,324.36
1913	63,470.80	22,080.39		41,390.41
1914	99,926.96	23,147.79	$634.71	77,413.88
1915	90,429.98	23,024.98		67,405.00
1916	84,491.47	1,691.07	904.30	83,704.70
1917	19,245.84	796.30	1,689.83	20,139.37
Total	428,722.68	88,573.80	3,228.84	343,377.72

The above table shows that a deduction has been made from the net operating gain reported by the company for interest amounting to $88,573.80 received for money not employed in the business during the six-year period. The Commission has excluded this interest in order to determine the actual income from operation of cars and has also excluded from the investment the estimated amount of money for the use of which this interest was received. An adjustment has also been made for income taxes included in operating expenses.

Comparison of the investment of the National Manufacturing Co. as shown in Table 50 with the net gain as adjusted in Table 51 shows that the rate of profit was 14.4 per cent in 1912, 12.7 per cent in 1913, 30.4 per cent in 1914, 27.5 per cent in 1915, 37.6 per cent in 1916, and 3.2 per cent in 1917. The total profit from operations for the period 1912 to 1917, inclusive, was $343,377.72, an average of $57,229.62 for each year, which is equal to an average rate of 16.9 per cent per year on the investment. The rate for 1917 should be somewhat higher than 3.2 per cent owing to the fact that the investment at the end of the year was used in figuring the rate. The assets of the Western Live Stock Express Co. were taken over by this company on July 1, 1917, and the investment figures shown in Table 50, therefore, represent the investment for the last six months of the year. If an average be struck from the investment at the beginning and end of the year the rate would be increased to 4.8 per cent.

The rates of profit for the years prior to 1916 would be increased if an adjustment for depreciation charges during those years was made to bring them in line with charges during 1916 and 1917. According to the company's report the rate for depreciation was changed in 1916 from 10 per cent to 6 per cent on the depreciated book value of the cars.

The surplus account of the National Manufacturing Co. at the beginning of the year 1912 amounted to $455,823.23 as compared with $744,193.15 at the end of 1917, a net increase of $288,369,92. During the 6-year period the company paid out $855,000 in dividends, representing 190 per cent on its capital stock, or an average of 31⅔ per cent per year for the six years. This was more than the company earned during the period, however, as the surplus account had been increased by dividends from the Western Live Stock Express Co. and by appraisals of its car properties.

Western Live Stock Express Co.—This company is no longer in existence, having been absorbed by the National Manufacturing Co., the owner of all of its stock on June 30, 1917, at which time it owned 759 stock cars. In Table 52 a comparative statement is given of the assets and liabilities of this company for the fiscal years 1912 to 1916, inclusive, and for the six months ending June 30, 1917. Comparative statements of earnings and expenses for the same period are shown in Table 53. The figures as shown in these tables are exactly in accord with the figures submitted by the company.

TABLE 52.—*Comparative statement of assets and liabilities of Western Live Stock Express Co., fiscal years 1912–1916, inclusive, and six months ending June 30, 1917.*

(Compiled from figures as reported by the company.)

	Dec. 31, 1912.	Dec. 31, 1913.	Dec. 31, 1914.	Dec. 31, 1915.	Dec. 31, 1916.	6 months ending June 30, 1917.
ASSETS.						
Car property	$580,520.76	$559,903.04	$378,591.33	$355,250.14	$326,005.01	$323,930.01
Betterments			44,777.53	91,751.94	96,338.99	96,445.49
	580,520.76	559,903.04	423,368.86	[1] 447,002.00	422,344.00	420,375.50
Less depreciation	136,046.61	162,431.33	38,906.47	56,244.91	62,647.94	71,709.58
	444,474.15	397,471.71	384,462.39	390,757.17	[2] 360,296.06	348,665.92
Office furniture and fixtures	487.55	487.55	619.29	626.04	626.04	626.04
Cash	8,282.20	3,053.26	6,708.31	794.79	10,544.57	7,793.92
Accounts receivable	66,955.18	114,093.50	120,428.45	119,693.36	63,682.72	57,349.12
Contingent fund	1,500.00	1,500.00	1,500.00	1,500.00	1,500.00	1,072.89
Total	521,699.08	[3] 516,605.78	513,713.44	513,371.36	[2] 436,649.39	415,507.89
LIABILITIES.						
Capital stock	275,000.00	275,000.00	275,000.00	275,000.00	275,000.00	275,000.00
Surplus	246,699.08	241,605.78	238,713.44	238,371.36	161,649.39	140,507.89
Total	521,699.08	516,605.78	513,713.44	513,371.36	436,649.39	415,507.89

[1] Error of 8 cents in company's figures as reported.
[2] Error of $600 in company's figures as reported.
[3] Error of 24 cents in company's figures as reported.

TABLE 53.—*Comparative statement of income and expenses of Western Live Stock Express Co., 1912–1916., and six months ending June 30, 1917.*

(Compiled from figures as reported by the company.)

	Dec. 31, 1912.	Dec. 31, 1913.	Dec. 31, 1914.	Dec. 31, 1915.	Dec. 31, 1916.	6 months ending June 30, 1917.
EARNINGS.						
Mileage	$139,419.28	$129,697.71	$112,930.93	$107,904.18	$101,221.58	$38,641.35
Interest	2,957.23	5,534.92	6,049.20	5,918.46	2,465.95	921.53
Rentals	8,544.72	9,150.00	9,150.00	9,150.00	9,150.00	4,251.97
	150,921.23	144,382.63	128,130.13	122,972.64	112,837.53	43,814.85
EXPENSES.						
Repairs	69,826.58	87,659.48	79,402.57	75,508.65	52,071.15	28,473.09
Depreciation	35,349.44	34,277.79	31,135.15	31,619.27	23,292.79	10,762.96
Pay roll	9,435.54	9,304.78	14,712.08	9,772.38	10,073.50	5,391.50
Office expense	16,595.42	17,321.72	5,286.82	5,732.50	3,118.89	1,372.38
Insurance and taxes	1,643.25	912.16	485.85	681.92	1,003.17	559.48
Loss, furniture and fixtures						576.04
	132,850.23	149,475.93	131,022.47	123,314.72	89,559.50	47,135.45
Net gain or loss	18,071.00	[1] 5,093.30	[1] 2,892.34	[1] 342.08	23,278.03	[1] 3,320.60

[1] Loss.

A study of Table 53 discloses that the company reported a net loss in 1913, 1914, 1915, and 1917, while in 1912 and 1916 gains were reported. The net gain for the five and one-half years as reported by the company amounted to $29,700.71, or an average gain of $5,400.10 for each year of this period. These figures, however, include interest as income amounting to $23,847.29, which the company evidently received for money not needed in its own business and which it loaned to Swift & Co. In judging the results from the operation of its cars it is necessary to exclude this interest from the earnings as reported by the company, and this has been done by the Commission as shown in Table 55. The money thus loaned should be excluded from the assets in determining the amount of capital employed in the business. In Table 54, where an attempt has been made to determine the investment of the company, deductions are made from the total assets reported by the company for the amount which the Commission has estimated was loaned each year. It was necessary to estimate this amount by capitalizing the interest received by the company since the amount loaned is not shown separately on the reports of the company. A rate of 6 per cent was used in each case, although it is probable that 5 per cent would be more nearly correct for the years 1912 to 1915, inclusive. Two tables showing adjustments made by the Commission in determining the investment and the net income from operations follow:

TABLE 54.—*Investment of the Western Live Stock Express Co., as estimated by the Commission, 1912–1916, and six months ending June 30, 1917.*

Year.	Total assets as reported.	[2] Deduct for intercompany account.	Investment as estimated by the Commission
1912	$521,699.08	$49,287.16	$472,411.92
1913	516,605.78	92,248.66	424,357.12
1914	513,713.44	100,820.00	412,893.44
1915	513,371.36	98,641.00	414,730.36
1916	436,649.39	41,099.16	395,550.23
1917[1]	415,507.89	15,358.83	400,149.06

[1] Six months ending June 30. [2] Estimated amounts.

TABLE 55.—*Adjustments by the Commission to the net gain figures as reported by the Western Live Stock Express Co., 1912–1916, and six months ending June 30, 1917.*

Year.	Net gain as reported.	Deduct interest, included in income.	Adjustments for income tax, included in expenses.	Net gain as adjusted.
1912	$18,071.00	$2,957.23		$15,113.77
1913	[1] 5,093.30	5,534.92		[1] 10,628.22
1914	[1] 2,892.34	6,049.20		[1] 8,941.54
1915	[1] 342.08	5,918.46	$172.04	[1] 6,088.50
1916	23,278.03	2,465.95	354.04	21,166.12
1917[2]	[1] 3,320.60	921.53	465.56	[1] 3,776.57
Total	29,700.71	23,847.29	991.64	6,845.06

[1] Loss. [2] 6 months ending June 30.

A comparison of the investment as determined by the Commission with the adjusted net income shows that in 1912 the rate of profit was 3.2 per cent and in 1916 it was 5.3 per cent. Leaving the half year of 1917 out of consideration, it was found that the average rate of profit

on the average investment for the five-year period was 0.5 per cent. The company charged depreciation on the book value of its equipment for the years prior to 1916 at the rate of 8 per cent but this rate was reduced to 6 per cent on the depreciated book value of the equipment in 1916 and 1917.

In 1916 a dividend amounting to $100,000 was paid out of surplus and in 1917 another dividend of $18,000 was paid. A liquidation dividend of $139,863.23 was paid from surplus when the company went out of existence in June, 1917. The surplus thus distributed in these two years had been mainly accumulated prior to 1912.

Libby, McNeill & Libby.—This company owned 60 refrigerator cars and 36 tank cars in 1917 valued at $105,669.89. These cars are operated as a department of its packing business. The results from operating the cars of this company are included in the Swift Group for the reason that Libby, McNeill & Libby was a subsidiary of Swift & Co. until 1918. During that year Swift & Co. divested itself of the ownership of Libby, McNeill & Libby by distributing the stock which it had owned in that company among the stockholders of Swift & Co. The following income and expense statements for the years 1912 and 1917 were submitted by the company.

TABLE 56.—*Comparative statement of income and expenses of Libby, McNeill & Libby (car line department), 1912–1917.*

(Compiled from figures as reported by the company.)

	1912	1913	1914	1915	1916	1917
INCOME.						
Mileage and per diem earnings	$11,737.06	$14,762.82	$19,130.09	$14,424.25	$9,956.14	$8,199.31
EXPENSES.						
Car repairs and shop expense			11,952.34	12,484.25	7,954.76	11,519.84
Depreciation			3,587.35	7,040.76	26,304.88	15,012.75
Taxes			89.60	159.85	44.23	
Total expense	[1] 21,090.40	[1] 15,081.33	15,629.29	19,684.86	34,303.87	26,532.59
Net loss	9,353.34	318.51	[2] 3,500.80	5,260.61	24,347.73	18,333.28

[1] Details of expenses not given.

[2] Gain.

It appears from the above table that the company lost money for each of the six years except in 1914, when a gain of $3,500.80 was reported. The net loss for the six years as reported amounted to $54,112.67. The comparatively large losses in 1916 and 1917 amounting to $24,347.73 and $18,333.28, respectively, were due in part to a decline in revenue but primarily to an increase in the charge for depreciation. The decline in revenue was apparently due to the slower movement of its cars in the later years. The company reported that a rate of 6 per cent was regularly used in figuring depreciation charges, but the amounts charged for depreciation in 1916 and 1917 apparently were at the rate of 27.8 per cent and 14.2 per cent on the book value of the cars, and were therefore excessive as compared with previous years. According to the company's report the amounts charged for depreciation per car were $35.52 in 1914, $80.01 in 1915, $346.11 in 1916, and $156.38 in 1917. If the depreciation charges were reduced to a proper amount the company's losses in 1916 and 1917 would be considerably lower than those reported. The only information available by which the company's investment in the car

business could be determined is the amount reported as the book value of its car equipment. This was as follows for each of the six years:

Value of car equipment of Libby, McNeill & Libby, as reported, 1912–1917.

Year.	Book value of car equipment.	Year.	Book value of car equipment.
1912	$72,256.07	1915	$104,402.31
1913	131,931.37	1916	94,262.39
1914	117,346.08	1917	105,669.89

In view of the unsatisfactory reports submitted no attempt has been made to determine the rate of loss for this company.

MORRIS & CO. CAR DEPARTMENT.

Morris & Co. operates its cars through a transportation department of the packing company without a separately incorporated car company. The company owned 2,731 tank and refrigerator cars at the end of 1917. Table 57 shows the investment reported by the company for the car line department as of December 31 for the years 1912 to 1917, inclusive. No liabilities were reported, and it is presumed, therefore, that the total assets as stated represent the company's actual investment in the car line department. Table 58 shows the income and expenses as reported for the same period.

TABLE 57.—*Comparative statement of assets of Morris & Co. Car Department, 1912–1917.*

(Compiled from figures as reported by the company.)

Assets.	1912	1913	1914	1915	1916	1917
Buildings	$46,488.10	$46,488.10	$46,488.10	$46,488.10	$46,853.54	$46,853.54
Machinery and fixtures	41,549.90	41,177.73	42,595.46	42,714.23	42,822.91	42,831.58
Car equipment	1,985,073.37	2,220,397.54	2,353,552.27	2,507,227.53	2,564,316.22	3,300,078.09
Inventory and supplies	60,465.26	60,739.01	57,958.01	65,260.06	72,088.95	105,839.43
Bills and accounts receivable	21,428.45	33,284.11	21,475.09	8,562.68	10,893.77	13,790.32
Total assets	2,155,005.08	2,402,086.49	2,522,068.93	2,670,252.60	2,736,975.49	3,509,392.96

TABLE 58.—*Comparative statement of income and expenses of Morris & Co. Car Department, 1912–1917.*

(Compiled from figures as reported by the company.)

	1912	1913	1914	1915	1916	1917
Income:						
Gross earnings	$459,839.99	$498,306.51	$503,747.72	$601,524.37	$605,030.34	$642,577.86
Expenses:						
Maintenance and repairs	194,872.39	260,266.18	294,587.32	288,312.99	298,199.87	364,049.88
Depreciation	46,418.50	137,455.81	130,127.92	146,817.20	164,920.68	167,961.13
Taxes on car equipment	3,584.95	2,676.13	3,231.48	3,724.77	3,917.21	4,712.19
Insurance	1,652.99	1,781.63	1,519.77	1,501.50	1,728.00	1,364.00
General expense	44,329.28	50,965.82	45,771.11	52,271.73	64,619.14	112,932.74
Total expense	290,858.11	453,145.57	475,237.60	492,628.19	533,384.90	651,019.94
Net gain or loss	168,981.88	45,160.94	28,510.12	108,896.18	71,645.44	[1] 8,442.08
Adjustments by the commission:						
Add interest included in general expense					31,435.00	102,731.00
Net gain as adjusted	168,981.88	45,160.94	28,510.12	108,896.18	103,080.44	94,288.92

[1] Loss.

The commission has adjusted the figures for 1916 and 1917, as shown in the above table, by adding back the interest charged by Morris & Co. against its car line department. The interest charges had been included in the general expense items for these years and deducted from the earnings of the department along with other expenses of operation. The interest charge for 1917 amounted to $102,731 and the net loss of $8,442.08 reported is converted therefore into a net gain of $94,288.92 from operations for the year. The company did not report that any interest had been included in the general expenses for the years 1912 to 1915 inclusive, but a comparison of the amounts of general expenses charged to operating expenses during those years with the amount charged for general expenses in 1917 would seem to warrant the conclusion that the general expense charges for the earlier years were unnecessarily high, due probably to the inclusion of interest charges.

Comparison of the total assets as reported, which apparently represents the company's investment in its car line, with the net income from operations as adjusted, shows that the rate of profit earned was 7.8 per cent in 1912, 1.9 per cent in 1913, 1.1 per cent in 1914, 4.1 per cent in 1915, 3.8 per cent in 1916, and 2.7 per cent in 1917. The total amount of profit for the six years was $548,918.48, or an average of $91,486.41 for each year. This represents an average rate of 3.4 per cent on the investment. The company charged operating expenses for depreciation on its car properties at the rate of 3 per cent in 1912 and 6 per cent each year thereafter.

CUDAHY PACKING CO. CAR DEPARTMENT.

This company does not have a separately incorporated car company. It operates its cars as a department of its packing business. It owned 1,454 cars on December 31, 1917. A comparative statement of assets and liabilities has been prepared, as shown in Table 59, from the figures reported by the company for the fiscal years 1912 to 1917, inclusive. In Table 60 is given the income and expenses as reported for the same period. No revision or adjustment has been made in either of these tables to the figures submitted by the company. In Table 61 the Commission has made an adjustment to the results reported by the company for the interest which it had included in operating expenses.

TABLE 59.—*Comparative statement of assets and liabilities of the Cudahy Packing Co., Car Department, 1912-1917.*

(Compiled from figures as reported by the company.)

	1912	1913	1914	1915	1916	1917
ASSETS.						
Cash	$83,560.22	$114,554.45	$141,516.67	$147,500.95	$108,784.92	$85,266.74
Accounts receivable	67,855.36	82,329.64	58,517.29	65,593.58	60,463.62	74,290.40
Inventories	171,769.04	153,934.08	114,554.25	78,296.51	116,562.37	245,119.93
Land	91,151.57	91,151.57	91,151.57	91,151.57	91,151.57	91,151.57
Buildings and machinery	106,019.32	99,642.73	102,185.62	102,744.68	103,164.17	103,485.24
Car equipment	1,360,198.73	1,491,777.34	1,687,534.01	1,682,775.01	1,574,721.01	1,300,139.48
Total	1,880,554.24	2,033,389.81	2,195,459.41	2,168,062.30	2,054,847.66	1,899,453.36
LIABILITIES.						
Capital employed in the business	1,871,562.24	2,021,243.22	2,177,252.25	2,145,955.05	2,031,052.56	1,885,005.11
Accounts payable	8,992.00	12,146.59	18,207.16	22,107.25	23,795.10	14,448.25
Total	1,880,554.24	2,033,389.81	2,195,459.41	2,168,062.30	2,054,847.66	1,899,453.36

TABLE 60.—*Comparative statement of earnings and expenses of the Cudahy Packing Co., Car Department, 1912–1917.*

(Compiled from figures as reported by the company.)

	1912		1913		1914	
	Dr.	Cr.	Dr.	Cr.	Dr.	Cr.
Mileage earnings		$423,098.06		$453,074.06		$440,991.71
Supplies furnished other departments		3,181.13				
Miscellaneous earnings				863.20		13,417.78
Sales				4,076.15		6,274.75
Repair supplies and labor	$177,186.11		$165,293.44		$134,083.57	
Tools	4,271.04		2,982.64		1,846.87	
Plant repairs	360.28		5,417.45		4,053.92	
Machinery repairs	1,963.14					
Power	7,137.88		7,675.47		7,323.94	
Labor			97,299.54		69,861.22	
Operating expense	16,724.78		6,167.55		3,006.68	
Car renewals	3,500.00		1,964.42		1,230.20	
Betterments			2,504.66		11,173.45	
Scrap			3,898.06			1,910.38
Repair bills		9,583.44		22,090.01		8,804.52
Loading			28.68			
Hooks			1,036.21		1,921.00	
Racks			13,573.61		11,581.26	
Car cleaning	10,704.48		16,589.21		15,501.56	
Salaries	18,171.63		25,203.09		32,356.57	
Traveling	7,576.93		9,423.07		7,008.27	
Sundries			5,182.49		7,676.62	
Stationery	1,782.50		1,749.80		1,684.01	
Arbitrary			2,400.77		7,162.87	
Fire insurance			1,204.02		1,230.98	
Fire loss	1,388.27					
Accident insurance	428.04		1,411.68		1,668.80	
Insurance	1,004.40					
Taxes	3,885.24		3,883.04		4,842.18	
Rent	1,800.00		2,400.00		3,000.00	
Depreciation and interest	108,872.31		131,683.07		125,994.57	
Legal					30.56	
New and rebuilt cars				110,554.20		
General expense	4,330.22					
Interior equipment	4,405.09					
Wrecked cars	911.58					
Ripsaw and crane	33.90					
	376,437.82	435,862.63	508,971.97	590,657.62	454,239.10	471,399.14
Net gain	59,424.81		81,685.65		17,160.04	
	435,862.63	435,862.63	590,657.62	590,657.62	471,399.14	471,399.14

TABLE 60.—*Comparative statement of earnings and expenses of the Cudahy Packing Co., Car Department, 1912–1917*—Continued.

	1915		1916		1917	
	Dr.	Cr.	Dr.	Cr.	Dr.	Cr.
Mileage earnings		$512,484.51		$463,543.00		$406,533.57
Miscellaneous earnings		1,185.23		6,930.15		14,927.01
Sales		8,359.07		8,485.04		4,975.89
Repair supplies and labor	$119,039.77		$98,723.81		$103,428.80	
Tools	1,066.99		1,202.91		1,465.14	
Plant repairs	3,716.63		4,038.91		4,607.68	
Power	6,685.37		7,393.57		9,405.33	
Labor	58,986.94		50,588.96		45,729.05	
Operating expense	3,156.61		5,107.34		8,212.70	
Car renewals	1,202.57		2,850.97		11,767.63	
Betterments	4,480.11		5,870.83		12,175.13	
Scrap		1,746.43		4,634.61		13,926.98
Repair bills		10,433.72		739.45	23,067.08	
Calumet repair track			1,905.90		567.94	
Hooks	2,806.90		2,388.42		4,824.12	
Racks	18,451.67		19,353.46		26,109.32	
Car cleaning	14,777.29		13,886.45		15,523.10	
Salaries	28,754.80		25,045.61		30,826.94	
Traveling	7,896.20		8,359.81		15,730.84	
Sundries	7,370.44		5,490.51		8,381.36	
Stationery	1,654.05		1,024.65		760.35	
Arbitrary	6,748.16		4,741.33		4,979.49	
Fire insurance	1,341.79		679.88		803.32	
Accident insurance	2,177.24		1,362.06		980.73	
Taxes	5,262.08		5,253.49		5,927.39	
Rent	1,894.00		2,400.00		2,400.00	
Depreciation and interest	129,365.08		108,352.45		117,045.39	
Legal			5.00		1,250.00	
	426,836.69	534,208.96	376,026.32	484,332.25	455,968.83	440,363.45
Net gain	107,372.27		108,305.93			[1] 15,605.38
	534,208.96	534,208.96	484,332.25	484,332.25	455,968.83	455,968.83

[1] Loss.

TABLE 61.—*Adjustments by the Commission to the net gain figures as reported by the Cudahy Packing Co., car department, 1912–1917.*

Year.	Net gain as reported.	Adjustment for interest, included in expense.	Net gain as adjusted.
1912	$59,424.81	$21,326.64	$80,751.45
1913	81,685.65	38,189.82	119,875.47
1914	17,160.04	17,367.24	34,527.28
1915	107,372.27	16,384.66	123,756.93
1916	108,305.93	9,338.18	117,644.11
1917	[1] 15,605.38	23,063.44	7,458.06
Total	358,343.32	125,669.98	484,013.30

[1] Loss.

This company showed a gain from the operation of its cars for each year after adjustment for interest charges had been made. Comparison of the investment which is the item shown in Table 59 under the caption "capital employed in business," with the adjusted profits as shown in Table 61 discloses the fact that the rate of profit was 4.3 per cent in 1912, 5.9 per cent in 1913, 1.6 per cent in 1914, 5.8 per cent in 1915, 5.8 per cent in 1916, and 0.4 per cent in 1917. The total profit for the six years amounted to $484,013.30, or an average for each year of $80,668.88. This represents a rate of about 4 per cent per year on the average investment.

WILSON CAR LINES.

This company, which is a subsidiary of Wilson & Co. Inc., was organized for the purpose of owning and operating the cars used by Wilson & Co. Inc., in its packing business. Previous to 1916 the cars were operated by other companies controlled by Sulzberger & Sons Co., predecessor of Wilson & Co. Inc. The capital stock of the company on December 29, 1917, amounted to $700,000, of which amount the company reported that $700 had been issued for cash and $699,300 for property. The company owned 1,966 cars in 1917; a few of these cars built as early as 1890 were still in operation.

A comparative statement of the assets and liabilities of the Wilson Car Lines for the fiscal years 1912 to 1917 inclusive, is given in Table 62, and in Table 63 the income and expenses for the same period are also given. The figures stated in these tables represent the figures reported to the Commission by the company without revision or adjustment.

TABLE 62.—*Comparative statement of assets and liabilities of Wilson Car Lines, 1912–1917.*

(Compiled from figures as reported by the company.)

	Sept. 28, 1912.	Sept. 27, 1913.	Dec. 26, 1914.[1]	Dec. 25, 1915.	Dec. 30, 1916.	Dec. 29, 1917.
ASSETS.						
Railroad cars and equipment	$1,703,890.21	$1,804,774.81	$1,879,944.95	$1,878,218.18	$1,956,056.26	$2,289,854.76
Less depreciation	196,182.30	107,353.17	143,260.64	119,718.25	40,760.56	67,408.97
	1,507,707.91	1,697,421.64	1,736,684.31	1,758,499.93	1,915,295.70	2,222,445.79
Less purchase money obligations	281,963.67	372,641.35	217,419.19	89,718.00	40,046.76	....
	1,225,744.24	1,324,780.29	1,519,265.12	1,668,781.93	1,875,248.94	2,222,445.79
Merchandise	68,277.76	100,196.50	57,012.74	48,449.23	66,137.19	61,597.35
Accounts and bills receivable	307,996.92	85,041.71	72,966.14	57,630.25	64,224.11	55,184.81
Cash	3,893.26	2,189.25	3,354.57	1,804.10	304.81	3,987.50
Prepaid expenses	20,121.87	25,870.79	13,876.61	4,212.59	....	....
Prepaid interest and insurance	....	....	....	....	124.05	....
Prepaid interest	....	....	....	....	....	8.23
	1,626,034.05	1,538,078.54	1,666,475.18	1,780,878.10	[2]2,007,156.10	2,343,223.68
LIABILITIES.						
Capital stock	250,700.00	250,700.00	250,700.00	250,700.00	350,700.00	700,000 00
Bills payable	850,000.00	....	850,000 00	850,000.00	850,000 00	850,000 00
Accounts payable	204,689.71	871,509.92	145,365.28	162,147.96	320,544.42	297,602.26
Surplus	320,644.34	415,868.62	420,409.90	518,030.14	485,911.68	495,621.42
	1,626,034.05	1,538,078.54	1,666,475.18	1,780,878.10	2,007,156.10	2,343,223.68

[1] Fiscal year changed from September to December

[2] Error of $1,117 in company's figures as reported.

TABLE 63.—*Comparative statement of income and expenses of Wilson Car Lines (successor to C. B. T. Co.), 1912–1917.*

(Compiled from figures as reported by the company.)

Particulars.	Sept. 28, 1912.	Sept. 27, 1913.	Dec. 26, 1914.[1]	Dec. 25, 1915.	Dec. 30, 1916.	Dec. 29, 1917.
Gross earnings from car mileage, etc.	$382,624.00	$375,844.67	$454,574.92	$394,390.11	$386,817.25	$451,712.42
Deduct expenses:						
Car, mechanical, etc., expense	37,340.76	38,891.53	46,077.72	38,462.34	60,588.70	65,469.86
Administrative expense	55,947.67	53,381.59	54,314.27	41,270.75	35,939.05	53,881.96
Repairs	119,457.28	139,727.38	220,483.20	155,672.11	159,069.04	185,016.54
Depreciation	....	....	....	....	60,169.79	61,702.21
Interest	62,833.10	67,356.57	75,158.45	61,364.67	58,801.07	75,932.11
Total expenses	276,578.81	299,357.07	396,033.64	296,769.87	374,567.65	442,002.68
Profit from operations	106,045.19	76,487.60	58,541.28	97,620.24	12,249.60	9,709.74
Add or deduct:						
Capital assets reserve	....	....	[2] 54,000.00	....	54,000.00	....
Provision made for outstanding liabilities in previous years written back	....	18,736.68	....	....	....	....
Adjustment reappraisal of tangible properties	....	....	....	....	[2] 20,256.41	....
Loss on sales of dismantled equipment	....	....	....	....	[2] 78,403.48	....
Expense adjustment account	....	....	....	....	291.83	....
Net amount carried to surplus	106,045.19	95,224.28	4,541.28	97,620.24	[3] 32,118.46	9,709.74

[1] Year ending Dec. 26, 1914, covers period of 15 months. [2] Deduct. [3] Loss.

In determining the investment of the Wilson Car Lines the Commission has used the figures for total assets reported by the company as shown in Table 62 and has first corrected them by making an adjustment for purchase money obligations which were deducted from the railroad cars and equipment account in their statement. The purchase money obligations are a liability of the company representing payments to be made for equipment purchased. The accounts payable have then been deducted as shown in the following table and the balance is considered as the investment.

TABLE 64.—*Investment of the Wilson Car Lines as estimated by the Commission, 1912–1917.*

Year.	Total assets reported by the company.	Adjustment for purchase money obligations.[1]	Total assets as corrected.	Deduct accounts payable.	Investment as estimated by the Commission.
1912	$1,626,034.05	$281,963.67	$1,907,997.72	$204,689.71	$1,703,308.01
1913	1,538,078.54	372,641.35	1,910,719.89	[2] 21,509.92	1,889,209.97
1914	1,666,475.18	217,419.19	1,883,894.37	145,365.28	1,738,529.09
1915	1,780,878.10	89,718.00	1,870,596.10	162,147.96	1,708,448.14
1916	2,007,156.10	40,046.76	2,047,202.86	320,544.42	1,726,658.44
1917	2,343,223.68	....	2,343,223.68	297,602.26	2,045,621.42

[1] The purchase money obligations represent money owing by the company for equipment and are shown on the balance sheet as a deduction from the railroad cars and equipment account.

[2] This item is shown on the company's statement as $871,509.92, but allowance has been made for $850,000 which is known to represent an item shown as bills payable for previous and subsequent years.

The income and expense statements submitted by the company as exhibited in Table 65 are divided into two parts. The first part represents the results from operations and the second part contains surplus adjustment items which the company adds or deducts each year from the net income from operations carrying the balance to surplus account. In the following table the Commission has made adjustments to the profit from operations as reported by the company for interest and income taxes which it had charged to operating expense.

TABLE 65.—*Adjustments by the Commission to the net income figures as reported by the Wilson Car Lines, 1912–1917.*

Year.	Profit from operations, per company's statement.	Adjustment for interest charged to operating expense.	Adjustment for income tax charged to operating expense.	Net income from operations as adjusted.
1912	$106,045.19	$63,833.10		$169,878.29
1913	76,487.60	67,356.57		143,844.17
1914	58,541.28	75,158.45	$787.61	134,487.34
1915	97,620.24	61,364.67	26.86	159,011.77
1916	12,249.60	58,801.07		71,050.67
1917	9,709.74	75,932.11		85,641.85
Total	360,653.65	402,445.97	814.47	763,914.09

Comparison of the net income from operations with the investment as adjusted has been made to determine the rate of profit realized by the company on this basis, and the rates are given in column 1 of the following statement. Calculations have been made also to determine the rate of profit on the net worth (capital stock plus surplus) and on capital stock alone and these are shown in columns 2 and 3 of the schedule. In figuring the rate of profit on the basis of net worth and on capital stock the balance of these accounts at the beginning of the fiscal year has been used, and against this balance the Commission has applied the net income from operations as reported by the company, and thus interest has been considered as an expense, as it should be in such a computation.

Rate of profit for the Wilson Car Lines, 1912–1917.

Year.	Rate of profit on investment (balance at end of year).	Rate on net worth (balance at beginning of year).	Rate on capital stock (balance at beginning of year).
	Per cent.	*Per cent.*	*Per cent.*
1912	10.0	(1)	(1)
1913	7.6	13.4	30.5
1914	7.7	[2] 8.9	[2] 23.6
1915	9.3	14.5	38.9
1916	4.1	1.6	4.9
1917	4.2	1.2	2.8

[1] Figures not available for calculation.
[2] Rate based on company's figures after correction for income tax charged to operating expenses.

The total net profit from operations for the six years as adjusted by the Commission amounted to $763,914.09 or an average profit of $127,319.01, which is equal to 7 per cent each year on the investment.

T. M. Sinclair & Co. (Ltd.).—T. M. Sinclair & Co. (Ltd.), of Cedar Rapids, Iowa, has been a subsidiary of Wilson & Co., Inc., since 1913, having been acquired at that time by Sulzberger & Sons Co. which was the name of the organization known since 1916 as Wilson & Co., Inc. Prior to 1913 T. M. Sinclair & Co. (Ltd.) was an independent company. The cars owned by it have been operated as a department of the packing business under the name of the Cedar Rapids Refrigerator Line. The company owned 138 cars on December 31, 1917, with a reported value on that date of $69,588.25. No balance sheet was submitted by the company, but the following statement of income and expenses for the six-year period from 1912 to 1917 indicates that the company lost money in each year with the exception of 1914, when a small gain of $1,495.03 was reported. The net loss for the six years amounted to $19,109.34.

TABLE 66.—*Comparative statement of income and expense of T. M. Sinclair & Co. (Ltd.) (Cedar Rapids Refrigerator Line), 1912–1917.*

(Compiled from figures as reported by the company.)

	1912	1913	1914	1915	1916	1917
INCOME.						
Mileage	$39,134.84	$33,924.74	$39,268.57	$42,623.83	$43,689.95	$35,677.38
Car rental					386.00	309.00
Miscellaneous					687.95	2,110.83
Total	39,134.84	33,924.74	39,268.57	42,623.83	44,763.90	38,097.21
EXPENSES.						
Repairs	15,621.30	14,011.38	15,447.96	23,500.09	20,309.70	16,035.36
Mechanical expense					2,038.38	1,999.92
Depreciation	4,007.21	3,529.34	4,164.62	3,918.49	4,681.51	4,371.00
Car rental	13,727.58	12,635.00	15,178.48	18,408.53	17,978.20	20,049.05
Car expense					509.87	402.54
Expenses	7,259.21	5,419.20	2,982.48	3,295.22	2,432.19	2,419.48
Tax					308.49	280.65
Total	40,615.30	35,594.92	37,773.54	49,122.33	48,258.34	45,558.00
Net loss	1,480.46	1,670.18	[1] 1,495.03	6,498.50	3,494.44	7,460.79

[1] Gain.

NOTE.—The profits and losses here shown are exactly in accord with those reported by the company.

COMPARATIVE STATEMENT OF RATES OF RETURN, GROUPED BY REFRIGERATOR CAR LINES AND STOCK CAR LINES.

The average rate of profit realized on the investment from 1912 to 1917 by each of the private car lines owned and operated by the Big Five packers is shown below. The refrigerator car lines have been thrown in one group and the stock car lines in another, to bring out the very different rates of return in the two kinds of businesses.

Explanations have already been given covering the methods used by the Commission for determining the investment, and of the adjustments made to the reported net income figures of each company from which the rates below were computed.

Rates of profit on investment earned by the private car lines owned and operated by the Big Five packers, 1912–1917.

[Based upon the Commission's revision of the reports submitted by the companies.]

	Average rate.
	Per cent.
Refrigerator car lines:	
Armour car lines, 1912–1914	8.2
Armour car department, 1915–1917	4
Fruit Growers Express Inc., 1915–1917	17.9
Swift Refrigerator Transportation Co., 1912–1917	[1] 2.1
Morris & Co. car department, 1912–1917	3.4
Cudahy Packing Co. car department, 1912–1917	4
Wilson car lines, 1912–1917	7
Weighted average	4.8
Stock car lines:	
Swift Live Stock Transportation Co., 1912–1917	74.5
National Manufacturing Co., 1912–1917	16.9
Western Live Stock Express Co., 1912–1916	.5
Weighted average	11.9

[1] Loss.

It is apparent that the stock car lines were the most profitable since their average rate of return on the investment was 11.9 per cent as against an average rate of 4.8 per cent for the refrigerator car lines. The Fruit Growers Express Inc., which operates refrigerator cars, shows a higher average rate of return than the average rate of the stock car lines, but this is largely due to the fact that the returns of this company included profits from refrigeration. If the Fruit Growers Express Inc., be eliminated from the group operating refrigerator cars, the average rate for the group would be 3.3 per cent.

The mileage rates allowed for stock cars is lower than for refrigerator cars, but, judging from the higher average rate of return realized on the investment by the stock car lines, this disadvantage was apparently more than offset by the fact that the cost of stock cars was much lower, and consequently charges for depreciation and repairs were also lower than for refrigerator cars.

CAR LINES OF INDEPENDENT PACKERS.

Reports received by the Commission for 1917 showed that 21 independent packing companies owned only 9.3 per cent of all the car equipment owned by packing companies, while 90.7 per cent was owned by the Big Five packers. This included beef cars, other refrigerator cars used in the packing business, stock cars, tank cars, and miscellaneous equipment. It was found, however, that the independent packers owned only 6.9 per cent of the "brine-tank refrigerator cars" adapted to the shipment of fresh beef and carcass meats, which represents nearly 75 per cent of the total car equipment owned by the packing companies, while the Big Five packers owned 93.1 per cent of these cars. The number of refrigerator cars owned by independent packers ranged from 3 cars for a few companies to 547 reported by the largest of the independent companies. Only six

of the independent packing companies reported an ownership of more than 100 refrigerator cars, and the combined ownership of these six companies represented about 80 per cent of all the cars owned by the independent packers. All but a few of the independent packing companies found it impossible to submit a detailed statement of assets and liabilities and of income and expenses, covering the operations of their private cars, as most of them did not segregate these items on their accounting records with sufficient exactness and detail to make this possible.

Although the small independent packing companies do not operate a sufficient number of cars to make a comparison of their operating results with the Big Five packers of much value, three companies have been selected from the six independent companies owning more than 100 refrigerator cars and their financial results are given in the following pages of this chapter. These companies are the Kingan Refrigerator Line, the Cudahy Milwaukee Refrigerator Line, and the Morrell Refrigerator Car Co. The reports of these companies, although not complete in some respects, were selected because they seemed to more adequately cover the information needed to judge the rate of return than did the reports of the other independent companies in this group.

Kingan Refrigerator Line.—This company is separately incorporated and is engaged in operating the cars used by Kingan & Co. (Ltd.). The company operates almost entirely on borrowed money, as the capital stock is only $10,000 whereas total assets of the company were reported on October 31, 1917, at $598,657.47. This company owns and operates more cars than any of the other independent packing companies, the number reported as owned in 1917 being 562, of which 547 were refrigerator cars.

The reports of the company showed that the total operating income for the six-year period, 1912 to 1917, amounted to $605,645.40. The total expenses for the same period were $601,355.29, thus showing an excess income of $4,290.11. The expenses for the six years included, however, interest charges amounting to $135,772.50 and income taxes of $684.79. In determining the rate of return on the total investment, adjustment must be made for the interest and income taxes which were included in expenses. After making these adjustments the net operating income for the six-year period was $140,747.40, which is equal to an average yearly net income of $23,457.90. This represents a return of 4.7 per cent on the total investment. The return on the basis of the capital stock issued after allowing interest as an expense but before deduction of income taxes averaged 8.3 per cent for each of the six years under review. The company included in its expenses during the six years total charges for depreciation amounting to $130,029.22. Depreciation has been provided each year in accordance with the Master Car Builders Rules, and in addition thereto provision has been made for the difference between the book value of cars and the amount realized in the event of a sale or wreck

Cudahy Milwaukee Refrigerator Line.—This line is operated by and is simply a department of the Cudahy Bros. Co., a packing company of Milwaukee, Wis. In 1917 the company owned and operated 244 cars. The only revenue to the car department is for mileage. The reports for the years 1912 to 1917 show that a total of $246,685.98 was received from this source.. The total net gain for the six years

was reported as $103,986.13, but this was before any allowance had been made for depreciation. If an allowance of $55,000 for depreciation for the six years be made, which would be equal to a rate of 6 per cent on the average investment in cars as shown by the company's balance sheet, and is the rate used by the Swift Refrigerator Transportation Co., the net gain from operations would be approximately $49,000. This would be equal to an average yearly rate of 4.7 per cent on the total investment.

Morrell Refrigerator Car Co.—This company is not incorporated but is engaged in operating the cars used in its packing business by John Morrell & Co., of Ottumwa, Iowa. The entire revenue of the car operating company is from mileage. According to the company's reports the net earnings from operations for the four-year period, 1914 to 1917 inclusive, amounted to $159,896.20. Interest charges totaling $10,876.95 were included in the expenses however, so that after adjustment for this item the net operating income would be $170,773.15, or an average yearly income of $42,693.29. No provision for depreciation was made during the four-year period, hence the net operating gain would actually have been considerably less than the amount reported had depreciation been included as an expense. The company did not submit a statement of its assets and liabilities, but a report was submitted showing the cost of cars owned and operated from 1914 to 1917. The average cost of the cars for the period was slightly less than $263,000. If the cars were depreciated according to Master Car Builders Rules, $52,500 should be allowed for depreciation. This would leave net income from operations of $118,273.15, or an average yearly income of $29,568.29. The average return on the basis of the average cost of the cars would be 11.2 per cent for the period.

CHAPTER 4.

PACKER ICING STATIONS.

In this chapter consideration is given to the methods of refrigeration in the transportation of meats and meat foods and the operation of packer-owned icing stations. Chapter 4, Part III, will consider the subject of refrigeration as applied to fruits and vegetables.

Beef cars equipped with brine tanks require crushed ice to which salt is added in order to secure a brine solution which will produce a lower temperature than can be procured with ice alone. Fruit and vegetable cars, on the other hand, are equipped with bunkers in which block ice is used without salt. Fresh meat and some packing-house products require a temperature averaging freezing degrees, although the actual range may be anywhere from 15° to 36° F. A temperature must be maintained that will keep fresh meat chilled and frozen beef frozen. Dressed poultry at the present time is practically all shipped dry packed and requires the same temperature as fresh meat. Other dairy products such as butter, eggs, cheese, and milk do not require so low a temperature as meat products and are therefore usually shipped in ventilator refrigerator cars in which ice alone is used. Fruits and vegetables may be safely transported at temperatures ranging from 36° to 40° F., or even higher, and for refrigerating these perishables ice alone is used. Some packing-house products, and some vegetables also, require little or no refrigeration, ventilation being all that is required in the latter case. The practice of adding a small percentage of salt to the block ice used in a ventilator refrigerator car is growing in favor. A lower temperature is obtained and a smaller amount of ice is used.

For the refrigeration of perishables in transit, natural ice is preferable to manufactured ice for the following reasons:

1. Natural ice may usually be harvested at a lower cost than that for which artificial ice may be manufactured.

2. Natural ice melts more slowly and more uniformly than manufactured ice. The latter in melting becomes honeycombed or melts in streaks. Holes form extending far into the cake, with the result that a greater surface is exposed to the air, and meltage therefore takes place more rapidly than when the cake melts evenly.

3. The recent shortage of ammonia has further encouraged the use of natural ice. Through action of the National Association of Ice Industries a number of ice-manufacturing plants were shut down during 1918 in order to conserve ammonia. It is deemed advisable, therefore, both from the standpoint of economy in production and also of efficiency in refrigeration service to use natural ice wherever conditions permit.

Ice for brine-tank icing is usually crushed by machines; the cost of this operation, estimated by the National Association of Ice Industries, ranges from 50 to 75 cents per ton. In addition to the

cost of crushing the ice there is considerable loss by increased meltage in crushed ice.

The ice may not be crushed when and as needed, but must be prepared and kept in reserve waiting the arrival of the cars to be iced, the number of which is sometimes uncertain, as is also the time of arrival. The crushed ice is conveyed from the ice house to the car by means of carts. A common practice is to compute the amount of ice put into the brine tanks of a car by the capacity of a cart that may have been loaded with crushed ice some hours before the arrival of the car. A cart will hold on the average a little over three cakes of ice, or approximately 1,000 pounds. Although these carts may be kept in the ice house until needed, considerable meltage occurs for which the shipper or railroad has to pay. The quantity of salt used is also customarily determined by a measure of capacity instead of by actual weight. The unit of measure is usually the content of a shovel, which at the Altoona station of the Utility Operating & Supply Co. (Inc.), for example, is estimated to hold 28 pounds.

Some of the Big Five packers, besides owning an adequate supply of beef refrigerator cars, also own and operate icing stations located advantageously in official classification territory between East St. Louis, Chicago, and the Atlantic seaboard and north of the Ohio and Potomac Rivers.

Prior to November, 1914, when the company was dissolved and all its beef, tank, and miscellaneous cars were turned over to Armour & Co., shipper, Armour Car Lines operated 18 icing stations and platforms,[1] owned 7 stations leased to and operated by ice companies,[2] and had a 25 per cent interest in 4 stations operated by Swift & Co.[3] Ten icing platforms were turned over to the Fruit Growers Express (Inc.) for operation when that company was incorporated, November 5, 1914.[4]

[1] Icing stations and platforms owned and operated by Armour Car Lines in 1914: Ashburn, Ga., Georgia, Southern & Florida Railroad; Atlanta, Ga., Seaboard Air Line and Atlanta, Birmingham & Atlantic Railroad; Augusta, Ga., Georgia & Florida Railroad; Benton Harbor, Mich., Pere Marquette Railroad; Benton Harbor, Mich., Cleveland, Cincinnati, Chicago & St. Louis Railroad; De Queen, Ark., Kansas City Southern Railroad; Douglas, Ga., Georgia & Florida Railroad; High Springs, Fla., Atlantic Coast Line Railroad; Michigan City, Ind., Pere Marquette Railroad; Marshallville, Ga., Central of Georgia Railroad; Meggetts, S. C., Atlantic Coast Line Railroad; Mena, Ark., Kansas City Southern Railroad; Richland, Ga., Seaboard Air Line Railroad; Rome, Ga., Southern Railroad; Toccoa, Ga., Southern Railroad; Altoona, Pa., Pennsylvania Railroad; Columbus, Ohio, Pennsylvania Railroad; East St. Louis, Ill., Terminal Railroad of St. Louis.

[2] Stations in 1914 owned by Armour Car Lines but leased to and operated by the following ice companies:

Operating company.	Location.	Railroad.
Atlantic Ice & Coal Corporation	Atlanta, Ga	Louisville & Nashville.
Do	do	Western & Atlantic.
Do	West Jacksonville, Fla	Seaboard Air Line.
The Ice Delivery Co	Cincinnati, Ohio	Cincinnati, New Orleans & Texas Pacific.
Consumers' Ice Co	Grand Rapids, Mich	Pere Marquette.
Portsmouth Ice & Coal Co	Norfolk, Va	Norfolk & Portsmouth Belt Line.
Mutual Ice Co	Potomac Yards, Va	Washington Southern.

[3] Delray, Mich., Wabash Railway Co.; Nashua, N. H., Boston & Maine Railroad; Newport, Vt., Canadian Pacific Railway Co.; Havelock, Ontario, Canadian Pacific Railway Co.

[4] Icing platforms owned and operated by Fruit Growers Express (Inc.) since Nov. 5, 1914: Benton Harbor, Mich., Pere Marquette Railroad; Benton Harbor, Mich., Cleveland, Cincinnati, Chicago & St. Louis Railroad; Fort Valley, Ga., Central of Georgia Railroad; Jacksonville, Fla., Atlantic Coast Line Railroad; Michigan City, Ind., Pere Marquette Railroad; Marshallville, Ga., Central of Georgia Railroad, Meggetts, S. C., Atlantic Coast Line Railroad; Muskegon, Mich., Pere Marquette Railroad; Rome, Ga, Southern Railroad; Toccoa, Ga., Southern Railroad.

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Three stations, located at East St. Louis, Ill., on the tracks of the Terminal Railroad; Columbus, Ohio, on the Pittsburgh, Cincinnati, Chicago & St. Louis; and Altoona, Pa., on the Pennsylvania, were turned over to the Utility Operating & Supply Co. (Inc.), a subsidiary of Armour & Co., incorporated November 2, 1914, for the purpose of operating these stations.[1] The 25 per cent interest held by Armour & Co. in the stations operated by Swift & Co. was also turned over to the Utility Operating & Supply Co. (Inc.).

Swift & Co. at present owns and operates five stations located in official classification territory and Canada. These stations are as follows: Coteau Junction, Province of Quebec, Canada, on the Grand Trunk; Karner, N. Y., on the New York Central; Mahoning, Pa., on the Lehigh Valley; Manchester, N. Y., on the Lehigh Valley; Port Huron, Mich., on the Grand Trunk.

It operates three stations, located at Delray, Mich., on the Wabash; Nashua, N. H., on the Boston & Maine; and Newport, Vt., on the Canadian Pacific, for the interest jointly of Swift & Co. (58⅓ per cent), Armour & Co. (25 per cent), and Morris & Co. (16⅔ per cent).

The station at Havelock, Ontario, on the Canadian Pacific Railway, formerly operated by Swift & Co. for the interest jointly of Armour, Morris, and Swift, was sold to the railway company January 5, 1915. Operation of this station was discontinued because the Canadian Pacific Railway Co. improved and straightened its road. This improvement resulted in a short cut that eliminated Havelock on through shipments, and therefore the station was no longer of use. The railway company erected a station on the cut-off at Trenton, Ontario, which it operates at the present time.

Wilson & Co. (Inc.) and The Cudahy Packing Co. do not own, operate, or have any interest in icing stations or facilities.

UTILITY OPERATING AND SUPPLY CO. (INC.).

The Utility Operating & Supply Co. (Inc.) was incorporated November 2, 1914, and has operated three icing stations until quite recently. Previous to its organization car refrigeration and icing in transit were performed by the Armour Car Lines. At the hearings before the Interstate Commerce Commission (1913–14) the Armour Car Lines objected to being classed as a common carrier, F. W. Ellis, representing the car lines as a witness, refusing to reply to questions that would serve to include the car lines in the category of common carriers, as set forth in detail in chapter 4, Part I. While the suit was pending, Armour Car Lines was dissolved and the disposition of its cars and icing stations made as previously explained in this chapter. The reason given by Armour & Co. for the distribution of its equipment was principally to bring the cars and equipment used in its meat industry directly under the control of Armour & Co. as shipper. The other branches involving instrumentalities of transportation were turned over to the two newly incorporated

[1] The station at Altoona was operated by the Utility Operating & Supply Co. until June 17, 1918, when it was sold to the Pennsylvania R. R. Co. The stations at East St. Louis and Columbus were operated by the Utility Co. until February 1, 1919, when they were sold to the Terminal Railroad Association and the Pennsylvania Lines, respectively.

companies (Fruit Growers Express and the Utility Operating & Supply Co.), as already explained.[1]

The Utility Operating & Supply Co. is capitalized for $25,000. The stockholders, with the number of shares held by each and his position, are the following employees of the Utility Co. and of Armour & Co.

	Shares.
G. D. Taylor, president	75
J. E. Hartwell, secretary-treasurer	75
H. K. Crafts, commerce counsel for Armour & Co	55
Geo. E. Cook, vice president	35
A. G. Kitchen	10
Total	250

The entire stock held by the aforementioned individuals is, according to the statement of the president of the company, "held for the ultimate benefit of Armour & Co."

The station at East St. Louis is situated on the tracks of the Terminal Railroad Association and has accommodations sufficient for icing approximately 12 cars at a time. The present lease for the land on which the station and other facilities are erected was made September 9, 1915, and was to extend from the 1st of November for a period of five years. The property so leased has on it an icing station, platform, tracks, and equipment for car icing, all owned by the Utility Operating & Supply Co. (Inc.). The rental for the real estate is a nominal one of $1 per year. The Utility Operating & Supply Co., however, is obliged to pay all taxes and assessments of any sort on the property covered by the lease.

The icing station at Columbus, Ohio, is situated on the tracks of the Pittsburgh, Cincinnati, Chicago & St. Louis Railroad. The station is equipped for the icing of two trains of 17 cars each at the same time. According to the original lease held by the Armour Car Lines the rental per year was then $5. When the lease was assigned to the Utility Operating & Supply Co. (Inc.) the rental was increased to $600 per year.

The Altoona station is situated at Juniata, a mile or two from Altoona, on a tract of land of approximately two acres, leased from the Pennsylvania Railroad Co. The platform will permit the icing of about 12 cars at a time. The equipment comprises an icing station, platform, office, dwelling, and a coal shed. The rental paid the railroad company is only $1 a year.

The company does not harvest or manufacture any ice. All ice used at its stations is either purchased under contract from harvesters of natural ice, in which case the ice is hauled to the icing station when cut, and stored, or it is secured from ice manufacturers and delivered as desired in specified quantities. The price both for natural and manufactured ice varies considerably even over a period of one year.

An interesting feature of some of the contracts between the Utility Operating & Supply Co. (Inc.) and the ice companies is contained

[1] It is probable that the reorganization was made at that time with a view to solving the questions raised by the Interstate Commerce Commission: 1. Shall a shipper company be permitted to ice both its own and competitor cars? 2. Shall a shipper company be permitted not only to own cars for its individual use but at the same time lease them to competitors and other shippers?

in a section regarding the sale of ammonia by Armour & Co. to the ice company. The section reads as follows:

The ice company hereby agrees to buy from Armour & Company and the Utility Operating & Supply Company hereby agrees to be caused to be sold to the ice company, such ammonia as the ice company's business may require during the life of this contract, provided Armour & Company's price is as low as competitor's price for the same grade of ammonia, and in the event of competitor's price being lower than Armour & Company price for ammonia, Armour and Company shall be afforded an opportunity to meet the competition.

This section was regularly included in practically every contract between the Utility Operating & Supply Co. (Inc.) and the various ice companies from which it purchased ice up to about the year 1917. In recent contracts, however, it has been omitted for no apparent reason unless it be that Armour & Co. was able to secure the ammonia orders without the reciprocal arrangement, or that its output was sufficiently in demand that it was not required to make any extraordinary effort in effecting sales.

Table 67 shows the combined balance sheet for the Utility Operating & Supply Co. for the fiscal years 1915 to 1917, inclusive.

TABLE 67.—*Utility Operating & Supply Co. (Inc.), balance sheet, 1915–1917.*

	Oct. 30, 1915.	Oct. 28, 1916.	Oct. 27, 1917.
ASSETS.			
Capital assets:			
Buildings and machinery	$34,828.15	$29,679.04	$26,762.68
Equipment	2,107.35	1,976.31	2,399.67
Total capital assets	36,935.50	31,655.35	29,162.35
Current assets:			
Inventory miscellaneous supplies	10,064.73	6,033.38	15,204.06
Armour & Co. loan account		59,000.00	104,000.00
Accounts receivable	74,696.05	69,451.59	49,276.49
Cash on hand and in banks	8,809.68	2,020.00	3,156.42
Deferred items	508.55	898.35	1,086.40
Total current assets	94,079.01	137,403.32	172,723.37
Total assets	131,014.51	169,058.67	201,885.72
LIABILITIES.			
Current liabilities:			
Accounts payable	12,078.70	13,827.48	20,296.43
Bills payable	18,741.90		
Capital liabilities:			
Capital stock	25,000.00	25,000.00	25,000.00
Surplus	75,193.91	130,231.19	156,589.29
Total liabilities	131,014.51	169,058.67	201,885.72

It will be noted from the balance sheet that the valuation of the capital assets decreases approximately $8,000 in three years. This is due to the depreciation written off on buildings and machinery. The accumulated surplus of the company for three years' operation amounted, on October 27, 1917, to $156,589.29. Since issuing the foregoing statement, the company on April 23, 1918, paid a dividend of $90,000.

Table 68 gives a condensed statement of the income account furnished the commission by the Utility Operating & Supply Co.:

TABLE 68.—*Utility Operating & Supply Co. (Inc.), income account, 1915–1917.*[1]

	Oct. 30, 1915.	Oct. 28, 1916.	Oct. 27, 1917.
Earnings:			
Net sales	$137,201.32	$117,728.16	$112,348.75
Net interest collected		918.27	3,877.52
Net leased car earnings[2]	11,006.18	12,763.81	4,588.98
Gross earnings	148,207.50	131,410.24	120,815.25
Expenses:			
Repair and maintenance	4,612.62	4,811.85	5,783.40
Depreciation	4,987.52	5,203.05	5,232.33
Labor	39,592.51	41,757.10	52,924.69
Salaries	11,195.56	11,006.58	14,099.92
Rent		504.00	724.75
Taxes and insurance	4,384.98	4,641.21	4,384.08
General expenses	6,441.01	6,710.40	7,265.55
Total expense	71,214.20	74,634.19	90,415.13
Net earnings	76,993.30	56,776.05	30,400.12
Other income	1,125.97		
Net income	78,119.27	56,776.05	30,400.12
Deductions:			
Interest	2,873.03		
Income, excess profits, and capital stock tax	52.33	1,738.77	4,042.02
Total deductions	2,925.36	1,738.77	4,042.02
Net available for dividends	75,193.91	55,037.28	26,358.10

[1] This statement is condensed from a statement submitted to the commission by the company. The net profit shown here is the same as reported by the company.

[2] This income represents mileage received from 150 stock cars leased from the Streets Co. for use of the New York Butchers Dressed Meat Co. in the shipment of stock from Chicago to New York. The Utility Co. pays a rental to the Streets Co. of 40 cents per car per day and receives credit for all the mileage made by these cars.

This statement includes, in addition to the profits derived from the operation of icing stations, the profit from two feeding stations situated on the Fort Wayne division of the Pennsylvania Lines, one at Fifty-first Street, Chicago, and the other at Clarke, Ind. These feeding stations handle feed and bedding for the purpose of caring for live stock in transit. The station at Fifty-first Street, Chicago, also sells sand and gravel. This station pays a rental of $233.34 a year for lease of the land on which it is situated. Profit from the operation of these stations for the fiscal year 1917 was $2,055.36 for the Clarke station and $4,124.70 for the station at Chicago. Operation of the station at Clarke, Ind., was discontinued June 1, 1918. The icing stations at Columbus and Altoona have been the most profitable and in no year during the past three have they been operated at a loss. The station at East St. Louis, however, operated at a loss of approximately $4,000 in 1917. It will be seen from the income account that the company made a large profit each year amounting to $75,193.91 in 1915, $55,037.28 in 1916, and $26,358.10 in 1917. This amounts on the average to 200 per cent on the capital stock for each of the three years, or 36 per cent on the net investment.

The Utility Operating & Supply Co. (Inc.), as stated in a footnote, leases stock cars from the Streets Co. for the use of the New York

Butchers Dressed Meat Co., a subsidiary of Armour & Co., located in New York City. It will be noted that the earnings of the Utility Co. are increased by the mileage from the operation of these cars.

Table 69 is an estimate of the total cost for furnishing ice and salt per ton of ice used in the car for the three stations for three years:

TABLE 69.—*Estimated costs of ice and salt per ton of ice used at icing stations of Utility Operating & Supply Co. (Inc.), 1915–1917.*

Station and year.	Average cost ice per ton at station.	Average cost salt per hundredweight at station.	Average pounds salt used per ton ice.	Cost ice and salt per ton ice at station.	Overhead expense per ton ice used.	Meltage loss per ton ice used.	Total cost ice and salt per ton ice in the car.
Altoona:							
1915	$1.53	$0.212	62.83	$1.66	$0.85	$0.03	$2.54
1916	1.66	.214	59.48	1.79	.89	.05	2.73
1917	1.86	.235	52.74	1.98	1.08	.14	3.20
Columbus:							
1915	1.19	.176	91.59	1.35	1.22	.02	2.59
1916	1.36	.187	78.02	1.51	1.28	.07	2.86
1917	1.40	.204	76.28	1.56	1.39	.06	3.01
East St. Louis:							
1915	1.22	.206	48.56	1.32	1.15	.003	2.47
1916	1.28	.223	82.12	1.46	1.31	.22	2.99
1917	1.51	.229	83.49	1.70	1.67	.31	3.68

Table 69 shows that the average cost of ice per ton delivered to each station increased uniformly for the three years. The uniformity is probably due to the fact that these stations are operated under similar conditions so far as the securing of ice is concerned. The increase itself is undoubtedly due to the general increase in material and labor costs. Included in the cost of ice is the cost of freight, switching, storage, and cost of handling the ice into the station. In order to secure the average cost of the ice and salt together, the average pounds of salt used per ton of ice was taken and the cost of this average amount of salt was added to the cost per ton of ice. To this total was added the overhead expense per ton of ice and also the meltage loss apportioned on the basis of the number of tons of ice used. The total of all these items, namely, the cost of ice and salt per ton of ice used, overhead per ton of ice, and meltage loss per ton of ice gives the total cost of ice and salt per ton of ice delivered in the car. Both the cost of ice and salt and the overhead expenses per ton have increased materially in the past three years. The loss from meltage was particularly great at East St. Louis. A loss of 31 cents per ton of ice used is unusally high, for ordinarily the loss from meltage does not exceed 10 per cent of the total ice used. Through some unusual circumstances, therefore, the loss from meltage at the East St. Louis station increased the expenses of icing for the year 1917 much more than should be the case under normal conditions.

The charge for icing meats and packing-house products at East St. Louis has been $2.50 per ton of ice. The charge for icing fruits and vegetables, on the other hand, has been $3.50 per ton. These are the charges made to the railroad which in turn makes the same charge to the shipper. It is seen from Table 69, therefore, that the cost for furnishing the service in the former case has been considerably greater during the past two years than the charges for the service.

This explains the operating loss for this station. At Altoona and Columbus, on the other hand, the Utility Operating & Supply Co. (Inc.) has been operating at a profit. At these stations the company has a special arrangement with the Pennsylvania Lines whereby the railroad company pays the Utility Company $2.50 per car for reicing each car of fresh meats, irrespective of the quantity of ice and salt furnished. For icing shipments of other perishables, the railroad company pays $2.50 per ton for the ice actually used and 50 cents in addition for the labor of placing it in the bunkers. Table 70 shows the average amount of ice used per car for three years at Altoona and Columbus, also the Utility Operating & Supply Co.'s profit per car iced, based on the cost figures furnished the commission by it.

TABLE 70.—*Profit of Utility Operating & Supply Co., Inc., per car iced at the Altoona and Columbus stations, 1915-1917.*

Station and year.	Average tons ice used per car.	Average cost ice and salt per ton ice.	Average cost per icing each car.	Revenue per car iced (tariff rate).	Profit per car iced.
Altoona:					
1915	0.813	$2.56	$2.08	$2.50	$0.42
1916	.945	2.76	2.61	2.50	[1].11
1917	.886	3.23	2.86	2.50	[1].36
Columbus:					
1915	.697	2.59	1.81	2.50	.69
1916	.763	2.88	2.20	2.50	.30
1917	.771	3.05	2.35	2.50	.15

[1] Loss per car iced.

It here appears that the average tons of ice used per car is approximately nine-tenths of a ton, or 1,800 pounds at Altoona, and three-fourths of a ton, or 1,500 pounds at Columbus. The average cost to the Utility Company for icing each car is considerably less than the payment received from the railroad company of $2.50 per car. For two years, 1916 and 1917, at Altoona, it appears that the expense for the service was so great that the company operated at a loss even under this arrangement. For the year 1915, however, it made more than 40 cents per car iced. At Columbus the earnings have been considerably greater than at Altoona, for in 1915 the company made 69 cents per car iced and 15 cents in 1917.

In 1917 the station at Altoona iced approximately 26,000 cars, 14,000 of which were beef cars. These 14,000 cars cost the railroad company $2.50 each or $35,000. The railroad in turn collected approximately only $2.25 per car, or $31,500. It is, therefore, seen that the loss to the railroad company on the icing of beef cars alone was $3,500. If approximately 12,000 cars carrying perishables other than fresh meat were iced at Altoona during 1917 the railroads suffered an additional loss of $6,000 by being required to pay 50 cents per car for labor, which charge is absorbed by the railroad and not transferred to the shipper owning the product. From this estimate it may therefore be seen that the railroad company loses approximately from 25 to 30 cents per car on every car of fresh meat reiced at Altoona and 50 cents per car on fruits and vegetables. The loss to the railroad

company at Columbus was even greater, for the average amount of ice used per car at this station was less than at Altoona, and the railroad's revenue is based on the amount of ice used.

ICING STATIONS OPERATED BY SWIFT & CO. FOR THE JOINT INTEREST OF UTILITY OPERATING & SUPPLY CO. (INC.), MORRIS & CO., AND SWIFT & CO.

As previously mentioned, Swift & Co. operates three stations for the joint interest of Armour, Morris, and Swift. In apportioning expenses at these stations the owners contribute to the ordinary operating expenses of icing their own cars in proportion to the number of cars iced for each one. The total fixed expense, on the other hand, is apportioned among the three companies on the basis of ownership. The cost of salt is borne by the three companies on the basis of the estimated quantity of salt used in each company's cars, plus its ownership proportion of the cost of salt used in foreign cars. The cost of ice is apportioned on the same basis as salt. The expenses under these four bases is worked out separately and apportioned to the various companies. Each company is credited with its proportion of profit from the operation of foreign cars and the difference between this and its share of expenses makes up the cost to it for icing its own cars. Table 71 is an income and expense statement compiled and condensed from the statements submitted by Swift & Co., and shows the average per car cost to the packers of icing their cars.

TABLE 71.—*Average per car cost of icing packer cars at stations jointly owned by Armour & Co., Swift & Co., and Morris & Co.*

Station and year.	Revenue.			Expenses.					Deficit from operation represents cost to owners of icing own cars.	Number of cars iced for owners.	Average per car cost to owners icing own cars.
	Icing foreign cars.	Ice sales.	Total revenue.	Cost of ice in station.	Cost of salt used.	Operating expense.	Fixed expense.	Total expense.			
Delray, Mich.:											
1915	$14,014.64	$345.57	$14,360.21	$7,803.66	$1,013.83	$9,433.02	$430.42	$17,980.93	$3,620.72	7,280	$0.50
1916	18,111.67	171.64	18,283.31	10,552.96	589.80	10,327.56	3,037.93	24,508.05	6,224.74	5,868	1.06
1917	14,460.06	435.06	14,895.12	8,447.77	1,043.22	15,188.84	....	24,679.83	9,784.71	4,165	2.35
Nashua, N. H.:											
1915	612.52	....	612.52	1,377.51	422.70	2,499.21	249.95	4,549.37	3,936.85	1,669	2.36
1916	778.26	....	778.26	1,091.79	233.34	2,838.17	89.00	4,252.30	3,474.04	1,429	2.43
1917	854.02	....	854.02	1,228.27	139.67	4,078.84	....	5,446.78	4,592.76	786	5.84
Newport, Vt.:											
1915	1,225.25	570.81	1,796.06	1,235.68	611.21	3,290.57	917.25	6,054.71	4,258.65	2,746	1.55
1916	1,464.38	1,606.98	3,071.36	1,193.56	41.52	2,928.92	377.55	4,541.55	1,470.19	629	2.34
1917	1,673.18	98.48	1,771.66	519.76	26.08	3,272.19	....	3,818.03	2,046.37	87	23.52

It may be seen from the table that the average cost to the owners of icing their cars was exceedingly high at some stations during certain years. The average cost at all stations for the entire three-year period, however, was only $1.60 per ton, which is considerably below the general charge of $2.50 per ton of ice throughout the country. The average cost to the owners at the various stations in the different years varies considerably. At Delray, Mich., in 1915 the average per car cost for icing the car of an owner was 50 cents; in 1916, $1.06; and in 1917, $2.35. The average per car cost of ice for an owner's car was generally higher for the three years at Nashua, N. H. The reason for this is that a much smaller number of foreign cars was iced at this station and a smaller number also of owners' cars. The natural result was that operating expenses had to be maintained and distributed over a less number of cars than is ordinarily the case at an icing station in general use. The extraordinary cost to the owners of $23.52 per car at Newport in 1917 was due to the same cause, namely, a falling off in the number of cars iced.

The average cost per car to the owners for icing their cars, as shown in Table 71, does not represent the actual cost to each company, for as previously stated the expenses to each company are apportioned on both the basis of ownership and the proportionate share of materials used and number of cars iced for each company. Therefore the actual cost to each company for having its own cars iced varies each year for each station and sometimes a particular company has a credit on the icing of its own cars while the other companies may be required to pay a considerable amount per ton. This difference is due to the varying number of cars iced by each company and also to the great difference in the interest of the various companies in the stations. Table 72 presents the actual cost to Armour & Co., Morris & Co., and Swift & Co. for the icing of their own cars for the three years, 1915 to 1917, inclusive.

TABLE 72.—*Actual cost to Utility Operating & Supply Co. (Inc.) (Armour & Co.), Morris & Co., and Swift & Co. for icing their own cars at Delray, Nashua, and Newport for years 1915–1917.*

Station and year.	Utility Operating & Supply Co. (Inc.).			Morris & Co.			Swift & Co.		
	Number cars iced.	Cost per car.	Credit balance.[1]	Number cars iced.	Cost per car.	Credit balance.	Number cars iced.	Cost per car.	Credit balance.[1]
Delray:									
1915	3,127	$0.85	....	2,120	$0.85	....	2,033	....	$830.06
1916	2,221	1.21	....	2,463	1.32	....	1,184	$0.24	....
1917	1,850	2.15	....	1,837	2.07	....	478	4.16	....
Nashua:									
1915	554	2.35	....	170	2.37	....	945	2.36	....
1916	862	2.48	....	49	2.11	....	518	2.38	....
1917	467	4.58	....	2	147.06	....	317	6.82	....
Newport:									
1915	739	1.55	....	306	1.57	....	1,701	1.55	....
1916	45	....	$17.06	67	1.72	....	517	2.65	....
1917	2	215.93	....	4	74.63	....	82	16.05	....

[1] Credit due company as profit in addition to cost of icing its own cars.

It is seen that at Delray for the year 1915, Swift & Co. had a credit of $830.06 on the icing of 2,033 cars, while at the same time Armour and Morris were required to pay 85 cents per car on the icing of 3,127 and 2,120 cars, respectively. At the same station in 1916 Swift again had the advantage of being required to pay only 24 cents per car on 1,184 cars, while Armour and Morris were required to pay approximately $1.25 per car each. In 1917 at the same station, however, the advantage was the other way, for in this year Swift was required to pay $4.16 per car for the icing of 478 cars while Armour and Morris paid approximately $2.10 each for the icing of 1,800 cars.

At Nashua for the years 1915 and 1916 it may be noted that the expense to all the companies for icing their own cars was practically the same, although the number of cars iced varied considerably. In 1917 the expense at Nashua to the three companies for icing their cars varied considerably. Armour and Swift paid $4.58 and $6.82 per car, respectively. Morris had only two cars iced at a cost of $147.06 each. This is an unusual situation and is due to the fact that such a small number of cars was iced in this year.

The expense to each company at Newport for the year 1915 was approximately uniform. In 1916, however, it varied somewhat, for in this year Armour & Co. received a credit of $17.06 on the icing of 45 cars whereas Morris was required to pay $1.72 each on 67 cars and Swift $2.65 each on the icing of 517 cars. The year 1917 was an unusual year at this station because of the small amount of business done. Armour & Co. had two cars iced at a cost each of $215.93. Morris had four cars iced at a cost each of $74.63. Swift had 82 cars iced at an average cost of $16.05.

It must be remembered that the average per car cost to the packers of icing their cars throughout the three-year period was $1.60. The operation of icing stations in this territory has, therefore, been a profitable business and would undoubtedly have continued profitable in 1917 if the same amount of car icing had obtained. The stations are so operated that the profit received from the operation of foreign and competitor cars goes to make up the expense of icing the owners cars and reduces their transportation expenses accordingly. Table 73 presents the cost of furnishing ice and salt per ton of ice delivered in the car at the three stations:

TABLE 73.—*Estimated costs of ice and salt per ton of ice used at icing stations located at Delray, Nashua, and Newport, 1915-1917.*

Station and year.	Average cost of ice per ton at station.	Average cost salt per hundred-weight at station.	Average pounds salt used per ton ice.	Cost ice and salt per ton ice used.	Overhead expenses per ton ice used.	Meltage loss per ton ice used.	Total cost ice and salt per ton ice in the car.
Delray, Mich.:							
1915	$0.75	$0.144	76.76	$0.86	$1.08		$1.94
1916	1.09	.152	41.32	1.15	1.37	$0.0027	2.52
1917	1.04	.192	54.46	1.14	1.57		2.71
Nashua, N. H.:							
1915	.77	.259	91.45	1.01	1.51		2.51
1916	.76	.260	50.77	.89	1.65		2.54
1917	.96	.271	44.69	1.08	3.62	.0383	4.74
Newport, Vt.:							
1915	.15	.262	63.51	.32	1.12		1.44
1916	.15	.262	30.83	.23	.64		.87
1917	.17	.262	12.97	.20	3.54	.348	4.08

The average cost of ice per ton at Newport is considerably below the cost at the other two stations. This difference is due to the fact that the ice for this station is harvested by Swift & Co. from a lake situated near the station. The harvesting cost is very low but the overhead expenses per ton were very high in 1917, so that the total cost of ice in the car was twenty times the harvesting cost in 1917. This extraordinary overhead expense per ton would undoubtedly have been considerably less if the station had done a reasonable amount of business. The cost of ice and salt in the car is fairly reasonable with the exception of the year 1917 for the stations at Nashua and Newport. It is evident that unusual conditions existed during this year as compared with 1916, for overhead expenses increased more than 100 per cent at the Nashua station and nearly 500 per cent at Newport.

ICING STATIONS OWNED AND OPERATED WHOLLY BY SWIFT & CO.

Swift & Co., as previously stated, owns and operates five icing stations in the northeastern part of the United States and in Canada, as follows: Coteau Junction, Province of Quebec; Karner, N. Y.; Mahoning, Pa.; Manchester, N. Y.; and Port Huron, Mich. Rates at these stations are uniformly $2.50 per ton of ice with no charge for salt. The rate for fruits and vegetables at these stations is $2.50 per ton of ice plus 50 cents per car for the service of labor. Nearly all the ice used in these stations is natural ice which is harvested near the station where it is to be used and purchased under contract by Swift & Co. Port Huron is the only station for which Swift & Co. does its own harvesting, and consequently the average cost of ice per ton at this station is lower than the average cost of ice at the other four stations. Occasionally, however, when the ice in storage runs short, Swift & Co. is required to supplement the supply by outside purchases, and in some few instances it has been necessary to ship ice from the Chicago plant to the icing station. Whenever unusual conditions require the purchase of additional ice it usually demands a considerably higher price than the ice purchased under contract for storing during the winter. As a result the average cost of ice per ton throughout a year is increased considerably over what it would be if no emergency purchases were required. Table 74 is a condensed statement of income and expenses for each of the Swift stations for the years 1915 to 1917, inclusive, made up from a statement submitted by Swift & Co. It shows the average per car cost to Swift & Co. of icing its own cars.

TABLE 74.—*Average per car cost to Swift & Co. of icing own cars at own stations.*

Station and year.	Revenue.				Expense.				Deficit from operation represents cost to Swift & Co. icing own cars.	Number of cars iced for Swift & Co.	Average per car cost to Swift & Co. icing own cars.
	Icing foreign cars.	Ice sales.	Miscellaneous revenue.	Total revenue.	Cost of ice in station.	Cost of salt used.	Operating expense.	Total expense.			
Coteau Junction, Province of Quebec:											
1915	$11,835.78	$245.95		$12,081.73	$5,232.14	$2,986.14	$11,446.97	$19,665.25	$7,583.52	4,081	$1.86
1916	14,785.29			14,785.29	7,372.94	3,729.04	14,190.21	25,292.19	10,506.90	4,979	2.11
1917	16,405.31	2,076.62	$1,016.00	19,497.93	8,272.37	3,427.24	15,886.95	27,586.56	8,088.63	4,318	1.87
Karner, N. Y.:											
1915	20,872.71			20,872.71	12,237.53	3,209.16	10,951.56	26,398.25	5,525.54	4,941	1.12
1916	23,636.36			23,636.36	12,089.95	3,155.47	11,689.43	26,934.85	3,298.49	5,720	.58
1917	23,007.52		1,642.78	24,650.30	9,051.40	2,774.07	14,142.19	25,967.66	1,317.36	5,027	.26
Mahoning, Pa.:											
1915	5,702.41			5,702.41	4,455.82	2,277.80	8,758.72	15,492.34	9,789.93	6,269	1.56
1916	4,405.55			4,405.55	4,308.60	1,549.85	7,557.38	13,415.80	9,010.25	5,568	1.62
1917	9,589.44			10,551.95	5,972.03	2,171.06	11,032.69	19,175.78	8,623.83	6,196	1.39
Manchester, N. Y.:											
1915	13,995.91			13,995.91	8,889.09	2,879.14	10,965.27	22,733.50	8,737.59	9,403	.93
1916	12,344.38			12,344.38	13,954.16	2,841.79	10,840.74	27,636.69	15,292.31	8,847	1.73
1917	16,552.02		1,249.01	17,801.03	10,691.36	2,852.73	18,369.70	31,913.79	14,112.76	8,987	1.57
Port Huron, Mich.:											
1915	20,628.95	762.49		21,391.44	9,556.95	1,931.50	10,842.61	22,331.06	939.62	6,328	.15
1916	27,532.63			27,532.63	14,047.91	2,171.71	14,536.56	30,756.18	3,223.55	7,160	.45
1917	32,193.90		2,463.51	34,657.41	13,346.92	2,258.04	19,981.70	35,586.66	929.25	5,735	.16

The total revenue received from the icing of foreign cars was greater in 1917 than in 1915. Expenses also usually showed a considerable increase. The average per car cost to Swift & Co. for icing its own cars varied from year to year even at the same station and had no relationship to the total revenue. The variation is due to operating conditions and the varying number of cars iced. The cost per car ranged from 15 cents in 1915 at Port Huron to $2.11 in 1916 at Coteau Junction. More than 40 per cent of the cars iced for Swift & Co. at these stations during the three years were iced at an average cost of less than $1 per car. The average for all stations together for the three-year period is approximately $1.15 per car. This statement shows that the operation of these stations is a profitable business, since it enables Swift & Co. to ice its own cars at a cost considerably below the charge of $2.50 per ton for the icing of competitor cars (averaging in the three years about $1.80 per car),[1] and results in a financial advantage to Swift & Co. over its competitors who do not own icing stations, though this is very slight per pound of product shipped.

Table 75 presents the actual icing costs estimated from figures submitted by Swift & Co., and covers all expenses that go to make up cost of ice and salt delivered in the car.

TABLE 75.—*Cost of ice and salt per ton of ice used at icing stations owned and operated by Swift & Co., 1915–1917.*

Station and year.	Average cost of ice per ton at station.	Cost per hundredweight of salt at station.	Average pounds of salt used per ton of ice.	Cost of ice and salt per ton of ice used in station.	Overhead per ton of ice used.	Meltage loss per ton of ice used.	Total cost of ice and salt per ton of ice in car.
Coteau Junction:							
1915	$0.68	$0.332	125.12	$1.10	$1.60	$0.0353	$2.74
1916	.74	.290	147.40	1.17	1.62	.0962	2.89
1917	.83	.468	78.38	1.20	1.77	....	2.97
Karner:							
1915	1.33	.219	132.72	1.62	.99	....	2.61
1916	1.27	.219	112.39	1.52	.92	....	2.44
1917	1.16	.242	90.71	1.27	1.12	....	2.39
Mahoning:							
1915	.76	.239	157.67	1.14	1.44	....	2.58
1916	.81	.240	89.39	1.02	1.41	.0021	2.43
1917	.86	.248	107.79	1.13	1.36	....	2.49
Manchester:							
1915	.86	.185	145.64	1.13	1.02	.0014	2.15
1916	1.31	.193	139.20	1.58	1.02	.0857	2.69
1917	1.10	.234	103.30	1.34	1.53	....	2.87
Port Huron:							
1915	.75	.181	91.27	.92	.94	.0448	1.91
1916	.72	.187	78.78	.87	.98	.1302	1.98
1917	.82	.213	62.99	.95	1.24	....	2.19

Both the cost for ice per ton delivered at the station and also the overhead per ton of ice vary considerably for each station over the three years. It would ordinarily be supposed that owing to the increased cost of material and labor the variation would be upward, but in some instances there is a decrease in later years over the cost of preceding years. The weighted average cost of ice and salt per ton of ice in the car during the three-year period is slightly less for all the stations combined than the charge of $2.50 per ton which is levied.

[1] Over one-fourth of the "competitor" cars included in this computation were those of Armour & Co. and Morris & Co.

RATES FOR ICING FRESH MEATS AND PACKING-HOUSE PRODUCTS.

The charges levied at the stations operated by the packers are published in tariffs of the carriers and are generally collected by the railroad and remitted to the packer company performing the service. The charge for furnishing ice for fresh meats and all other packing-house products throughout the United States is a stated amount per ton of ice used. The charge for the refrigeration of fruits and vegetables, on the other hand, is a stated amount per car, per trip, per mile, or per package, and varies considerably according to the perishable character of the commodity.

The rate on meats and packing-house products is generally \$2.50 per ton of ice furnished. This rate applies practically to all territory east of the transcontinental zone. In northwestern territory, however, extending from the Missouri River to North Pacific coast points the charge is a stated sum per car for the entire service.[1] East of the Mississippi River and north of the Ohio and Potomac Rivers the rate is \$2.50 per ton of ice. This charge includes salt and all services connected with refrigeration. South of the Ohio and Potomac and in the West and Southwest the rate on fresh meats and packing-house products is generally \$2.50 per ton of ice and 40 cents per hundred pounds of salt with a minimum charge of \$1.25 per car for ice and 40 cents for salt.

The situation at Altoona and Columbus, previously explained, does not affect the cost of ice to the shipper requiring refrigeration service. He pays the railroad company for the actual amount of ice used on the basis of \$2.50 per ton for ice. Salt is furnished free. The railroad, however, pays the utility company \$2.50 per car for every car the company ices.

The rate of \$2.50 per ton of ice for icing fresh meats and packing-house products applies with practical uniformity throughout the United States, whether the service is rendered in the North, where natural ice may be harvested and stored at a very nominal cost, or in the South, where only manufactured ice can be secured, at a cost which in many instances is considerably greater than the rate for the service. The explanation by the packers of this situation is that competition for business through competitive points equalizes the refrigeration charge to the \$2.50 basis. This may be explained from the fact that packers' icing stations have been advantageously located in trunk-line territory over lines that are most frequently used for carrying the greatest amount of the packer business. The price is fixed at these stations, and any competitive line must therefore meet the price or fail to secure any packer traffic. That the same conditions exist in the Southeast is not clear, but it is argued that the stations in States even as far south as Alabama and Mississippi have to meet the flat rate of \$2.50 per ton due to competitive influences. It would seem that in such places, far removed from the packer stations, some factor other than competition influences the price of ice. It is probable that what the packer refers to as competition at these points in the South and Southeast is really competition among the railroads to secure the packer traffic.

In this connection, when the question of rates for reicing meats and packing-house products was being considered at the Interstate

[1] Westbound Transcontinental Refrigeration Charges, 34 I. C. C., 140.

Commerce Commission hearing in Chicago, E. W. Rice, general freight agent of the American Refrigerator Transit Co., was asked by R. O'Hara of Swift & Co. to state whether the reason for the difference between the charges levied for icing fresh meat and packing-house products and those levied for icing fruits and vegetables was not competition. His reply was that he did not know. When pressed still further as to the reason why the rate of $2.50 per ton was maintained in regions where the cost of manufacturing ice was considerably higher than this rate, his reply again was that he did not know and could not understand why the difference was necessary. Mr. O'Hara then said "Why don't you boost it [the rate of $2.50 per ton] and see how much business the A. R. T. will get." [1] This remark indicates the interpretation that should be given the term competition as a factor in establishing the uniform rate, and the deduction follows that the rate for icing is determined by packer influence and is maintained at $2.50 because of the traffic influence exerted over the railroads by the Big Five packers.

The charges at the same point in various sections of the United States for icing meats and packing-house products and for refrigerating fruits and vegetables vary considerably. For instance, at the Utility Operating & Supply Co. station located at East St. Louis, the charge for meats and packing-house products was until recently $2.50 per ton of ice, whereas the charge per ton for refrigerating fruits and vegetables was $3.50. The rates at the other packer-operated stations have been $2.50 per ton for both services with an additional labor charge of 50 cents per car for icing on fruits and vegetables. This additional charge is sometimes absorbed by the railroad company.

The service for icing fresh meats and packing-house products is normally more expensive than the service required for refrigerating fruits and vegetables, for meats and packing-house products require crushed ice and salt whereas fruits and vegetables may be iced with block ice and require no salt. This investigation has not developed data that would show the total excess expense entailed in the preparation and handling of crushed ice over that of handling block ice, but the estimate cited above (p. 144) places the amount at 50 cents to 75 cents per ton, excluding loss by excess meltage.

The Utility Operating & Supply Co. has explained that the service required for icing meats and packing-house products at East St. Louis is uniform and stable throughout the year, whereas the requirements for icing fruits and vegetables are unstable because of the varying production of such commodities and the varying amount of ice required in different seasons.

While this may serve as an explanation of the difference in the rates at East St. Louis, yet it does not suffice as a reason for the great difference in charges for the two services in southern sections of the United States, where the rate for fresh meats and packing-house products is uniformly $2.50 a ton and the rate for icing fruit and vegetable cars ranges as high as $5 to $7 per ton of ice. The explanation for such a difference seems to be the influence of the Big Five Packers on the railroads.

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[1] I. C. C. Docket 4906, v. 62, pp. 2955-2956.

DISCONTINUANCE OF PACKER OWNERSHIP OF ICING STATIONS.

As early as 1904 the Interstate Commerce Commission recommended to Congress that refrigeration and icing of perishables in transit should be administered by the railroad companies and the facilities required for the service should be owned and operated by them. In 1906 the Hepburn Act brought within the jurisdiction of the Interstate Commerce Commission supervision of icing charges, but it was not until July 31, 1918, that the commission directed the railroads to perform all refrigeration services for commodities in transit and required them to secure all privately owned icing stations anywhere operated on their lines.

The Utility Operating & Supply Co., apparently anticipating this decision of the Interstate Commerce Commission, sold the station located at Altoona to the Pennsylvania Railroad on June 15, 1918. This station was taken over and operation by the Pennsylvania Railroad was begun on June 17. It also sold the East St. Louis station to the Terminal Railroad Association and the Columbus station to the Pennsylvania Lines on February 1, 1919.

The Cudahy Packing Co. and Wilson & Co. (Inc.) have not had any interest in icing stations. At the hearing instituted by the Interstate Commerce Commission in 1912, The Cudahy Packing Co. went on record as being strongly opposed to private operation of icing stations. The company made the following statement in its brief filed in that case:

This service should not be delegated to some third party, especially one who has not the responsibility of a common carrier under the law. For efficient, economical, and impartial service the carrier alone should be responsible.

In reply to a question as to whether or not railroads should be permitted to contract with a shipper or shippers of perishable freight for performing the service of refrigeration or the reicing of shipments in transit the following specific objections were made by The Cudahy Packing Co., in its 1912 brief.

1. The opportunity exists for better service to be performed for the shipments of the shipper operating the icing facilities and also by slighting the service of a competitor's shipments, to greatly injure the property of his competitor, thereby causing such competitor irreparable injury.

2. In cases of close connection, delayed trains, or otherwise, there is an opportunity to favor contractor's shipments at the expense of competitors and thus expedite the movement of contractor's shipments and delay competitor's.

3. The shipper operating reicing facilities receives information as to volume, route and destination of shipments of his competitors. The placing of cars at reicing stations necessarily contemplates a practical delivery of shipments of perishable property to a competitor to furnish the delicate reicing service. The car number and initial, in many instances, indicates the shipper. In the process of transportation way bills and many times the cars themselves bear marks indicating the destination of shipments. The railroad delivering the car to the reicing plant shows the route.

4. Furnishing ice and salt in insufficient quantities or failure to properly tamp same and otherwise perform the service is possible, there being no opportunity for competitor or railroad to check weights or service or protect themselves except by unusual expense. Whereas the shipper operating the reicing facilities, especially if he operates a series of successive icing stations, has an immediate opportunity to check and correct a previous deficiency.

5. The opportunity for overcharging and underweighing exists without opportunity for the railroad or the competitor to check, and any investigations of complaints depend practically entirely upon the statement of employees of the interested shipper performing the service.

6. Whatever profit is made by the contractor out of the charges collected from the railroad for reicing the cars of other shippers amounts, in effect, to a reduction in the actual cost to the shipper furnishing the ice necessary for his own shipments, and wherever the railroad engages reicing services from any shipper and pays to such shipper for furnishing ice to other shippers an amount exceeding the sum charged and collected from such shippers by the railroad it thereby still further reduces the reicing cost on his own shipments to the shipper operating the icing station, and furthermore, the arrangement has a tendency to enable the railroad to control his traffic.

7. If the railroads alone performed the reicing service all shippers would then be equally interested in seeing that an efficient service was performed, and in the event of any deficiency in the car of any shipper, his complaint, if investigated and the situation improved, would result immediately in benefit to the service of every other shipper.

8. It is our firm conviction that if the Commission would advise the carriers that they take over all regular icing stations, and if the carriers should do so, it would develop that at the present rates charged shippers, the carriers' net revenues would be largely augmented, because a considerable profit can be earned. In fact, we believe that if the carriers would operate the icing stations they could not only make a considerable profit at the present rates, but, in fact, the rate could be reduced to all shippers and at the same time a reasonable profit be earned.

But, in the event that the carriers do not take over and operate the regular icing stations, it will be observed that should there be any increase in the present tariff rates for reicing, the present owners of icing stations would escape any increased expense, and the entire amount thereof would have to be borne by the shippers not so favorably situated.

9. Shippers furnishing reicing facilities on various trunk lines operating through different sections of the country route their traffic so as to take advantage of the lower cost for this item of transportation in the event of favorable conditions. Competitors are always required to pay for the service at the railroad tariff charge.

10. Railroads that have, in recognition of their public duty as common carriers, provided adequate reicing facilities, are at a distinct disadvantage in securing the shipments of shippers operating reicing facilities on other railroads, because it is obvious that the total transportation charge over such other railroads is lower to such shippers.

11. In case of damage to perishable property resulting from negligent transportation (reicing) the railroad is legally liable to the owner. This liability can not be evaded or limited, but may be greatly increased by engaging shippers to do the work. But, at the same time, the injured shipper's means of redress may not be so satisfactory, because the railroad, on account of the contractor's liability to it, usually attempts to evade all responsibility.

12. Operation of reicing facilities by shippers is for profit. Railroad operation of such facilities is to fulfill its legal obligation as a common carrier to properly care for the traffic entrusted to it.

From the foregoing quotation it appears that when refrigeration service is performed by a shipper he has an unfair advantage over his competitor, not only because of the profits derived from the operation of the business, but also because of the information he is able to obtain from the competitor's waybill containing the icing instructions. The quotation mentions specifically various other advantages resulting from this practice, all of which will be discontinued by railroad operation of icing facilities. At the hearing in February, 1918, The Cudahy Packing Co., upon arrangement with the other packers, decided not to bring up the subject of its objection as made at the previous hearing in 1912. The company stated in 1918 that its position with respect to icing service and stations was then substantially the same as that of the other packers.

Two essential improvements in the problem of refrigeration have been secured, first, supervision of rates by the Interstate Commerce Commission and their required publication, and second, operation of all icing facilities by the railroads. A third improvement is yet to be made, namely, the establishment of fair rates for refrigeration service of packer products in all sections of the United States.

CHAPTER 5.

FRUIT GROWERS EXPRESS INC.

It has already been stated that the stockholders of Armour & Co. hold the stock of the Fruit Growers Express Inc. in the same proportion as their holdings of stock in the packing company. The circumstances of the incorporation of the Fruit Growers Express Inc., in 1914 have also been explained. The company was organized for the purpose of owning and operating the fruit and vegetable cars and the icing stations of the Armour Car Lines. The financial operation of the Fruit Growers Express Inc. has also been discussed in chapter 3. It was there shown that this company has been doing a profitable business. This chapter deals with the company's relations with the carriers and shippers, from the standpoint of the public interest.

ARMOUR & CO. INTEREST IN SHIPPING FRUITS AND VEGETABLES.

Although the Fruit Growers Express Inc. has been incorporated only since 1914, the interest of Armour & Co. in the furnishing of refrigerator cars and refrigeration service for the transportation of fruits and vegetables dates back to a much earlier period. In the early nineties Armour & Co. began to experiment with the operation of a line of refrigerator cars for the carrying of California fruits to the East. As the business increased more cars were obtained either by purchase of car lines already existing or by the building of new cars until several thousand cars were employed in that traffic by the beginning of the present century. The Armour cars in the fruit and vegetable traffic have been operated under various trade names, namely, Fruit Growers Express Inc., Continental Fruit Express, Kansas City Fruit Express and Tropical Refrigerator Express. The cars belonging to the Armour interests in this business are now operated under one name—Fruit Growers Express Inc. Early in this present century the Armour business from the West began to decline, for certain of the western carriers, namely, the Union Pacific and Southern Pacific Railroads, jointly, the Wabash and Missouri Pacific Railroads, jointly, and the St. Louis-San Francisco Railway formed subsidiary car companies of their own for the handling of perishable products. As these companies grew and developed the western railroads became less dependent upon outside parties such as the Armour Car Lines for refrigerator cars in the transportation of the western products. Armour & Co.'s part in the handling of the fruit and vegetable traffic from the West has now declined until it is a very minor part of the fruit and vegetable business handled by the Armour (F. G. E.) cars.

As the western traffic declined, however, a volume of business was being built up in the new growing districts of the Southeast. Carriers there were not equipped to handle the growing business and the Armour cars were used in that section as early as the nineties. This traffic in the Southeast has grown until it is now the most important part of the business [1] handled in the 5,660 cars owned by the Fruit Growers Express, Inc.

[1] The larger part of the Fruit Growers Express business has been that of furnishing railroads with cars upon which the usual mileage has been received. Certain cars, however, have been leased for various periods of time to individual firms, a list of which is printed as Exhibit 3.

THE EXCLUSIVE CONTRACT.

The chief means by which the Armour interests have built up the business of furnishing refrigerator cars and refrigeration service for the transportation of perishables has been the "exclusive contract."[1] Under the terms of such a contract the car line agrees to furnish the contracting railroad company with suitable cars sufficient to handle the business that is offered to it by shippers on its lines and the carrier in turn agrees to use no cars other than those furnished by the private-car company. The reasons given for this arrangement were that perishable crops are in most instances seasonal, and that while railroads may enjoy a heavy tonnage for a few months of the year in perishable freight it is probable that the special equipment provided for this movement would be idle for a long period, since the railroad which provided itself with sufficient cars to meet the maximum demand could not use refrigerators other than as box cars during the remainder of the year; and that a corporation, on the other hand, which made it a business to provide such equipment would be able to keep it employed during the entire year by sending the cars to those particular sections needing them from time to time. These exclusive contracts grant a complete monopoly of the business to one car company. Armour & Co. secured an exclusive contract with the Southern Pacific Railroad in 1897 and with other western carriers at later dates. These contracts in the West did not remain in effect for any great length of time, however, for, as previously stated, the western roads began to provide their own refrigerator cars about the beginning of the present century and soon had little need for outside equipment.

In the Southeast an exclusive contract was secured with the Central of Georgia Railway in 1898. Other roads followed at later dates. At the present time the Fruit Growers Express Inc. has exclusive contracts with seven[2] of the southeastern roads, including among them the Atlantic Coast Line Railroad, the Seaboard Air Line Railway, and the Florida East Coast Railroad, three of the principal roads transporting fruits and vegetables from this section. Until recently the Fruit Growers Express Inc. held contracts with 29[3] railroads of the Southeast and two in the Middle West. It had a practical monopoly of the business of transporting fruits and vegetables from the Southeast, and the situation is therefore worthy of detailed consideration.

REFRIGERATION RATES UNDER EXCLUSIVE CONTRACT.

Many arguments have been advanced both for and against the exclusive contract. When exclusive contracts were first secured, refrigeration rates were increased almost immediately, and this increase in rates has been one of the chief objections to the exclusive contract. The Interstate Commerce Commission in a discussion of

[1] A copy of a typical exclusive contract is given as Exhibit 4.
[2] The names of the seven railroads are given as Exhibit 5.
[3] An exhibit giving the names of these railroads and their controlling interests is presented as Exhibit 6.

the exclusive contract in its annual report of 1904 summed up the situation as follows:

The result of these contracts has been, as a rule, to afford the public good service, and to generally provide a more adequate supply of cars than was formerly obtained, but the prices for refrigeration have been enormously and unreasonably increased.

For example, in 1898, the Armour Car Lines Co. was furnishing cars for the movement of Michigan fruits from points on the Pere Marquette Railroad to Boston in competition with other private-car companies, and its charge for refrigeration to Boston was $20 per car. Its present charge to Boston is $55 per car. Before the present exclusive contract was entered into between the Armour Car Lines and the Pere Marquette Railroad Co. the actual quantity of ice required was charged for at $2.50 per ton. Under this system the cost of refrigerating cars from Pawpaw, Mich., to Dubuque, Iowa, averaged about $10 per car, while the present schedule of the Armour Car Lines is $37.50. The cost of icing from Mattawan, Mich., to Duluth was $7.50, as shown by an actual transaction in the year 1902, while the present refrigeration charge between those points is $45. The cost of icing pineapples from Mobile to Cincinnati under an exclusive contract with the Armour Car Lines is $45, while the cost of performing the same service from New Orleans to Cincinnati over the Illinois Central is $12.50 per car.

Illustrations without number like the above might be given. Some of these are extreme, but our impression is that under the operation of these exclusive contracts the cost of icing to the shipper has been advanced from 50 to 150 per cent and that the charges in most cases are utterly unreasonable.[1]

It is undoubtedly true that the exclusive contract generally resulted in an increase in the charges to the shippers for refrigeration service and that in some cases these increases were entirely unwarranted. At the time of making this report in 1904 the Interstate Commerce Commission did not have jurisdiction over refrigeration rates, but these rates are now subject to review by the Commission. It has the power under the Hepburn Act to investigate a rate and to prescribe a reasonable rate in case the existing charges are found to be unreasonable. For this reason the refrigeration rate is now a relatively unimportant item in a consideration of the exclusive contract. Though the railroad, under the exclusive contract, furnishes to the shipper only the cars of the private car line, and though the private car line performs the refrigeration service in every case, the railroad is now responsible for the rates charged the public and such rates are subject to regulation by the Interstate Commerce Commission, and any shipper who considers a rate unreasonable may bring it to the attention of that body for determination.

CAR EQUIPMENT NOT EFFICIENT.

It will be noted that the Interstate Commerce Commission stated in its annual report of 1904 that "the result of these contracts has been, as a rule, to afford the public good service, and to generally provide a more adequate supply of cars than was formerly obtained." At that time this was no doubt generally true. The carriers in the growing districts could not afford to provide themselves with adequate refrigerator cars to meet the needs of the shippers, and the private car companies operating under exclusive contracts did furnish an adequate supply of cars. They have not, however, furnished good equipment at all times.

In the hearings held by the Interstate Commerce Commission in 1914 it was shown conclusively that the Armour Car Lines was generally furnishing poor equipment. Many witnesses testified to

[1] I. C. C. Annual Report 1904, pp. 14-15.

that effect. M. T. Adamson, inspector for the Atlantic Fruit Distributors (Inc.), of Chicago, presented an affidavit at the hearing to the effect that he had examined on February 3, 1913, a certain carload of bananas which arrived in Chicago in an Armour car in a badly frozen condition. This affidavit was inserted in the record, and describes the defects of the car as follows:

I examined the car itself and found it to be very defective. The bottom especially contained boards that were loose and openings between them. * * * The plugs did not fit tightly into the hatches and the openings caused by their not fitting tight would allow warm air to leave the car. Because of these and other defects of the car it was impossible to keep cold out from bananas and preventing their being frozen and chilled.[1]

O. G. Cook and Joseph Flaherty, representatives of the Connolly-Fanning Co., of Pittsburgh, also presented an affidavit that they had examined three Tropical Refrigerator Express (Armour) cars loaded with bananas and that they found the fruit in the lower part of the car badly frozen and chilled. These cars had been standing on the track in Pittsburgh in very cold weather for five days previous to the date of examination, which was in March, 1913. The condition of the equipment was described by the witnesses in their affidavit as follows:

We then examined car T. R. E. 30254, finding the north door right-hand side will not close properly, protruding fully an inch both in the middle and on hinge side, due to the fact that the boards into which hinges are screwed, has been racked out of place fully an inch at the bottom. On going into the car, we closed all doors, finding that light could be seen over the top of the above-mentioned north side door. The roof inside, on the east side, has been recently repaired, but the quarter round strip between roof and side is from one-half to 2 inches away from its proper position, and does not in any way effect the purpose for which it was intended.

On the outside, we find the corner boards badly racked, and also some of the boards on the south side loose from the floor sill, being about the width of a pencil from same in several places. This car also had stoves in from date of arrival without protecting fruit.

We next inspected car T. R. E. 30547, finding side boards loose at the bottom and also at the eaves, under the facia boards. Two end boards at west side over drawbar, were sprung out a sufficient distance to permit inserting one's finger under same. On going inside and closing doors, we found that the north door (left-hand side) permitted light to enter, the crack being fully one-half inch at the bottom and extending to very near the top. This car was also very loose inside, as we found fresh smoke or soot along nearly all of the cracks, some of the bananas, themselves, being black with fresh soot, showing that this car afforded absolutely no protection from climatic conditions, inasmuch as it would not even resist the smoke from the locomotive.

In contrast to this equipment, we will state that we inspected two cars on the B. & O. track, cars in question having arrived on March 5, 1913, containing fruit consigned to our competitors. P. & R. car 19774, arrived consigned to Crutchfield & Woolfolk, and has been exposed to identically the same climatic condition, there being about one-fourth of a car of fruit in same, free from frost and in perfect condition.

We also examined L. V. car 3543 consigned to S. Catanzaro & Co., this car arriving same day and is on track to-day with about one-half of contents free from frost and in excellent condition.[1]

This testimony, which was taken under oath, shows not only the poor condition of the cars which were furnished at that time by the Armour Car Lines but also shows by contrast the difference in the condition of fruit received in those cars and that received in cars of other companies. The witnesses stated that they had examined the fruit in a Philadelphia & Reading car which had been subjected to the same climatic conditions as the Tropical Refrigerator Express (Armour) cars, and had found that the fruit in the Philadelphia &

[1] I. C. C. Docket 4906, vol. 5.

Reading car was in good condition and that in the Tropical Refrigerator Express cars was in very poor condition.

Joseph Flaherty, of the Connolly-Fanning Co., also submitted another affidavit and placed it in the official record.[1] It is reproduced herewith:

CONNOLLY-FANNING CO.,
Pittsburgh, Pa., Mar. 10, 1913.

To whom it may concern:

During the winter seasons of 1911, 1912, and 1913, I have been handling for Connolly-Fanning Co. the selling end of their banana business. All of the fruit which they have received from the South has come from the Atlantic Fruit Distributors, New Orleans, and nearly all of it has been shipped in T. R. E. cars.

The condition of the fruit arriving here in these cars during the winter months has been so notorious that the trade will not pay as much for the same fruit in similar condition and similar weight arriving in a T. R. E. car as they will if it is contained in any other kind of equipment. This is because of the fact that they have so generally and regularly sustained losses due to frost damages where they purchase bananas out of T. R. E. cars.

It is usual during the cold weather to put heating seoves [stoves] in the cars and it has been my experience that in any kind of refrigerator cars outside of the T. R. E. cars a stove will not burn for any length of time with the plugs, vents, and doors closed.

On the other hand, almost invariably in the case of T. R. E. cars, the stoves will burn with all vents, plugs, and doors closed.

I consider this conclusive proof that this class of equipment permits the ingress of fresh air.

JOSEPH FLAHERTY.

Sworn to and subscribed before me this 10th day of March, 1913.

W. R. SHOUP,
Notary Public.[1]

The witness states in this affidavit that the generally poor condition of the Tropical Refrigerator Express (Armour) equipment is notorious. He says that fruit received in these cars will not bring the same price in the market as fruit received in other equipment because the trade has so generally sustained losses on such consignments. He says further that an oil stove will burn for considerable time in a Tropical Refrigerator Express car, whereas it will burn for only a very short time in other equipment because of the lack of oxygen in the air, which fact shows that the Tropical Refrigerator Express cars were not air-tight and therefore not capable of properly refrigerating perishables in transit.

Another affidavit placed in the record and signed by G. R. Williams, Traffic Manager of Chase & Co., Jacksonville, Fla., contains the following statement:

It is the writer's opinion that the bad condition on arrival at destination of such a large number of cars moving under refrigeration is caused to a large extent by the poor equipment that we are compelled to load.

I have recently made trips to the railroad yards in Jacksonville for the purpose of inspecting cars of celery and lettuce loaded in Fruit Growers Express equipment and moving under refrigeration. I have found from personal observation that the cars are old and worn out and that there is ample opportunity for improper refrigeration. The cars have been in service so long that the hair-felt and other fiber insulating materials which have been used have been in service so long that they are rotten. Where cars have been repaired the woodwork and painting has been made good while the insulation has not. Where there has been any attempt to replace the insulation it has not been properly done. Operating these cars as refrigerators is a good deal like attempting to warm up a house during zero weather with all the doors and windows open. The fact that we have so many commodities shipped in Armour (F. G. E.) cars during cold weather show frost damage on arrival destination is the best kind of evidence that the insulation is very poor and that cold gets in from the outside just as it gets out from the inside.[1]

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[1] I. C. C. Docket 4906, vol. 5.

This testimony shows that the witness was having generally poor results in shipping perishable commodities in Armour cars. He states that in his opinion the poor refrigeration is due to a lack of proper insulation in the car and the fact that the cars are generally old and worn out. Numerous witnesses testified in this hearing that the Fruit Growers Express Inc. cars were generally in a poor condition. A few witnesses from one small growing district testified that the equipment was good, but their testimony is so strongly overbalanced by the mass of testimony to the contrary, that it seems safe to conclude that they had either been especially fortunate shippers in receiving the best of the Fruit Growers Express Inc. equipment or that their opinions were for some reason prejudiced.

PAYMENT OF CLAIMS.

Various witnesses also testified at this hearing that they had presented large claims to the carriers for loss and damage to perishables carried in Armour cars and that but a very small percentage of these claims were ever paid. The railroads replied that no claim could be allowed since the icing records showed that the car had been properly refrigerated. When the shippers asked to see the icing record the railroads invariably answered that the Armour Car Lines refused to produce the same but claimed that the records showed proper refrigeration.

No testimony has been taken since 1914 concerning the condition of the Fruit Growers Express Inc. equipment, the quality of its refrigeration service, or the amount of claims for loss on goods carried in its cars. The subject was not considered in the recent hearings on the private car case.

The Fruit Growers Express Inc. cars, however, are still inefficient according to modern standards of efficient refrigeration; they are often in bad repair; and, even as to the newer cars, are not up to the standard required for the proper refrigeration of perishables in transit as the best practice has been developed by experience, experimentation, and tests. The refrigeration service, on the other hand, that is, the proper icing of the car from origin to destination, as furnished by the Fruit Growers Express Inc., seems to be of the best. The fact, however, that the icing service is carefully supervised can not amend for the unfit equipment, for no matter how carefully this is done, goods transported in a damaged or worn-out car will be subject to improper refrigeration.

EFFECT OF EXCLUSIVE CONTRACT.

During the time that the exclusive contract has been in operation the shippers of fruits and vegetables in the Southeast have been in the unfortunate position of being compelled often to ship their produce in poor equipment incapable of furnishing proper protection in transit. While it would appear that it is the duty of the railroad under the Act to Regulate Commerce to furnish "transportation" upon reasonable request therefor, and the term "transportation" by the definition of the statute includes cars and all instrumentalities or facilities of shipment or carriage and all services in connection

with refrigeration or icing of property transported,[1] yet it is nevertheless true that the obligation of the railroad with respect to furnishing adequate and suitable refrigerator cars under this statute and the means of enforcing the same through the Interstate Commerce Commission, or otherwise, have not been so developed as to afford the shipper any substantial relief as to quality or number of cars furnished where no discrimination can be shown as between different shippers. If there is discrimination in the distribution of cars, the Interstate Commerce Commission has the power to order that discrimination stopped, but if there is no discrimination the Commission has no adequate means of regulating the suitability or number of the refrigerator cars supplied. (See pp. 70 and 71.)

The lack of better provisions for refrigeration in the Southeast has been a great loss to the country of valuable foodstuffs. It has been a loss not only to the shippers, commission merchants, and other dealers in perishable fruits, but to the country as well, since part of the available supply has been destroyed. In the end, the consumer has to bear the damage to the goods in transit, since the loss sustained is reflected in the ultimate market price. It is clear that the public interest would be served by more efficient refrigerating car service than has been furnished by the Fruit Growers Express Inc. under its exclusive contracts.

A solution would be provision for a single ownership and responsibility for all three functions, namely, operation of the railroad, the furnishing of refrigerator cars, and the furnishing of icing service. This, if the railroad companies, as formerly, are to own and operate the railroads, would undoubtedly necessitate the cooperation of railroad carriers in different parts of the country so as to provide the supply of refrigerator cars required in different sections in different seasons without uneconomical duplication and waste. The association of this branch of the transportation business with outside interests controlling large amounts of traffic, even when such traffic is not transported in the cars in question, appears to be unnecessary and to contain potentialities of abuse that would be avoided if equipment and services of this character were owned and operated solely by the Government; or by the railroads themselves under some cooperative arrangement, subject in all respects to the jurisdiction of the Interstate Commerce Commission, for a pool of the refrigerator cars.

During the period of Federal control, the Railroad Administration has perfected designs for standard refrigerator cars, but due, in part, to the great demand on the country's facilities for the construction of military railroad equipment and ordinary railroad equipment of more general use, none of these standard cars were built during the war, and it is understood the Railroad Administration now has no funds available for the construction of such equipment and that none of the railroad companies whose properties now are under Federal control have as yet taken any steps toward constructing additional refrigerator cars.

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[1] Section 1, Interstate Commerce Act.

CHAPTER 6.

INFLUENCE OF THE BIG FIVE PACKERS ON RAILROADS.

Cases involving the influence of the Big Five packers on the railroads have already been briefly cited in this report. The influence results from the operation of their cars and the heavy volume of freight tonnage under their control. The packers' traffic has served as a bait to entice competing carriers to grant them special concessions. In indictments now pending it is alleged that false claims for damage to goods in transit have recently been presented by one of the Big Five packers to the carriers. Some of these claims have been paid in whole or in part by the railroads. Mixing rules operate to the packers' advantage. Large allowances are paid to some of the larger packers by the carriers for the performance of a part of the transportation service, such as the loading and unloading of live stock. Expedited service is given to the packers' cars. These are a few of the methods employed. Other cases of various kinds will be explained which involve influence of the Big Five packers on the railroads and employees to secure for themselves and their affiliated companies rules and regulations especially advantageous to their interests.

REBATES AND REFUNDS.

In 1908 Armour & Co., Cudahy Packing Co., Morris & Co., and Swift & Co. were fined $15,000 each for accepting rebates and concessions from common carriers in violation of the act to regulate interstate commerce and the acts amendatory thereof and supplementary thereto. There was nothing unusual about this proceeding, for at that time many of the larger shippers and some of the smaller ones in various industries were receiving special refunds and rebates from the carriers. A large number of shippers have been fined by the Interstate Commerce Commission for such violation of the act. It is the prevalent opinion that direct rebates have been discontinued in recent years, and this generally holds true for the Big Five packers, no doubt, as well as for other shippers. There is evidence tending to show, however, that some of the Big Five packers until very recently have still persisted in making unlawful agreements with the carriers and accepting unlawful rebates from them.

Indictment against Cudahy Packing Co.—The Cudahy Packing Co. is at present under indictment by a grand jury of the United States for collecting and attempting to collect various sums from the carriers for damage to goods in transit, on the basis of false bills, accounts, and affidavits. There are two indictments in the case. Both were filed on March 22, 1916, in the United States District Court, Eastern Division of the Northern District of Illinois. They cover the period of January 1, 1912, to March 22, 1916. The first

indictment names The Cudahy Packing Co., John A. McNaughton, James W. Robb, John E. O'Brien, Frank Melville, and the Chicago & Alton Railroad Co. as defendants.[1] The indictment is brought against the defendants for violation of section 37 of the criminal code, the act to regulate commerce, and the Elkins Act. It is charged in the indictment that the defendants knowingly conspired, combined, confederated, and agreed together to commit the offense of obtaining an allowance and payment to The Cudahy Packing Co. from certain common carriers for loss and damage to goods in transit by the use of certain false claims, false bills, accounts, and affidavits. Payment of such claims amounts to a rebate from the carrier to the shipper, in that it secures to the packing company transportation services at less than the published rates of the carrier.

It is further alleged that in pursuance and in furtherance of the unlawful conspiracy, combination, confederation, and agreement certain employees of the packing company who are named as defendants in the proceeding, namely, John E. O'Brien and Frank Melville, signed and swore to certain false statements which the signers, The Cudahy Packing Co. and the other employees of the packing company named as defendants, knew to be false, fictitious, and fraudulent. The affidavits alleged to be false are reproduced in the indictment.

The indictment also alleges that in pursuance of the conspiracy and to effect the object of the same the Chicago & Alton Railroad Co. entered into an agreement with The Cudahy Packing Co. to run a certain train from Kansas City, Mo., to Argo, Ill., in two hours less running time than its regular schedule.

The indictment also charges that the defendants formed a conspiracy to commit the offense of soliciting, accepting, and receiving for The Cudahy Packing Co. from The Chicago & Alton Railroad Co. and other common carriers large sums of money as concessions and rebates of the money which had been paid and was to be paid by the packing company to the various common carriers for transportation of the packing company's products.

The indictment also alleges that the formation of the conspiracy and the acts in pursuance and furtherance of the same, namely, the payment of sums of money by the carriers to The Cudahy Packing Co. on the basis of false claims for damage to goods in transit, the payment to the packing company of unlawful rebates, and the agreement providing for the transportation of the company's products on a schedule faster than the regular schedule applied to the transportation of products of other shippers, amount to a discrimination in favor of The Cudahy Packing Co. as against other shippers and competitors who were paying the full and regular charges for their transportation services.

The second indictment is brought against The Cudahy Packing Co., John A. McNaughton, and James W. Robb for violation of the act to regulate commerce and the Elkins Act. The indictment is in 50 counts. Each count deals with a particular shipment of meats and packing-house products by The Cudahy Packing Co. over the lines of one or more common carriers.

In 45 of these counts the indictment alleges that The Cudahy Packing Co., John A. McNaughton, and James W. Robb, employees of the packing company, presented to certain carriers claims for damage to

[1] The individuals named as defendants in this indictment are employees of The Cudahy Packing Co.

goods in transit, and that in support of these claims the defendants knowingly and willfully presented to the carriers false bills, statements, accounts, and affidavits. It is alleged that the defendants well knew that the documents filed with the carriers in support of these claims contained false, fictitious, and fraudulent entries. It is charged that the defendants knowingly and willfully represented that The Cudahy Packing Co. had sustained losses from damage to goods in transit when they well knew that there had been no such loss to the company. In each case the documents filed by the company with the common carrier in support of the claim, which documents are alleged to be false, are reproduced in the indictment. Of the 45 claims presented by the packing company to the carriers, 30 had been paid in whole or in part on the date of the filing of the indictment.

In the other five counts the defendants are charged with the offense of soliciting, accepting, and receiving from certain common carriers certain sums of money by falsely representing to the carriers that the packing company's goods had been damaged in transit. It is charged that these payments amount to an unlawful concession to the packing company in that they secure for it transportation services at less than the regular rates published in the tariffs of the carriers.

Jersey City Stockyards case.—Other big packers are under indictment returned by a grand jury of the United States on August 5, 1918. This indictment was brought against Armour & Co., Swift & Co., the Pennsylvania Railroad Co., and the Jersey City Stockyards Co. for violation of section 37 of the Criminal Code and section 1 of the Elkins Act of 1903, as amended by the Hepburn Act of 1906. The indictment is in five counts. The charge is that the defendant companies confederated and conspired to commit the offense of procuring for Armour & Co. and Swift and Co. a rebate and concession in respect to the transportation of live stock over the lines of the Pennsylvania Railroad Co. and connecting lines.

FIRST COUNT: The indictment alleges that Armour & Co., Swift & Co., and the Pennsylvania Railroad Co. did unlawfully, knowingly, and feloniously conspire, combine, confederate, and agree together to commit the offense of giving and receiving a rebate and concession in the transportation of the goods of the aforementioned packing companies over the lines of the Pennsylvania Railroad Co., whereby such shipments should and would be made and transported at less than the lawfully established rates.

The indictment sets forth that the Harsimus stockyards property is worth approximately $1,650,000 and has a rental value of more than $100,000 per year. In carrying out the purpose of the conspiracy it was agreed that Armour & Co. should organize the Jersey City Stockyards Co., which should be owned by Armour & Co. and Swift & Co. The Pennsylvania Railroad Co. should then lease the stockyards known as the Harsimus stockyards property to the Jersey City Stockyards Co. for $25,000 a year for a period of 10 years, with the privilege of renewal at the expiration of the lease. Payment of this inadequate rental is one basis for the indictment on the charge of obtaining a rebate or concession.

It was intended that the Jersey City Stockyards Co. should acquire a leasehold estate in the stockyards property, which should have an actual present cash value of more than $1,000,000. The capital stock of the stockyards company should be $500,000, but by virtue of acquiring a leasehold estate in the Harsimus stockyards property this

capital stock should have, at the time of issue, an actual intrinsic market value of more than $1,000,000. Issuance of this stock for $500,000 when it had an actual market value of more than $1,000,000 at the time of issue is a second basis for the charge against the packing companies that they were receiving a rebate and concession.

The indictment alleges that it was further agreed that Armour & Co. and Swift & Co. should ship all the live stock under their control by way of the Pennsylvania Railroad and connecting lines through Jersey City.

It is also set forth in this count that the property was leased to the Jersey City Stockyards Co. as intended; that the stockyards company did acquire the leasehold estate; that shipments were routed by the packing companies as agreed; that various devices were adopted to conceal the real ownership of the Jersey City Stockyards Co.; and that Swift & Co. became interested in the company as intended.

SECOND COUNT: The allegations set forth in count 1 are reiterated in count 2, with the additional charge that the defendants intended that Armour & Co. and Swift & Co., through the Jersey City Stockyards Co., should acquire a leasehold estate in the Harsimus stockyards property and that the same was knowingly intended by all defendants to be a rebate and concession to these companies.

THIRD COUNT: It is alleged that the defendants well knew Armour & Co. and Swift & Co. were charged an inadequate rental for the use of the stockyards property and that the defendants well knew that payment of such inadequate rental was a rebate and concession in favor of these companies by which they should secure transportation services at less than the lawfully established rates.

FOURTH COUNT: It is alleged that the inadequate rental and the consequent securing of transportation service at less than the lawful rates amounted to a discrimination in favor of Armour & Co. and Swift & Co. as against all other shippers.

FIFTH COUNT: It is alleged that the defendants conspired and confederated to give the Jersey City Stockyards Co. complete control and dominion over the stockyards property, although they well knew that this property was the live-stock terminal of the Pennsylvania Railroad for the discharge of stock shipped over its lines to Jersey City and New York City, and that the railroad possessed no other property used for this purpose and had no other terminal facilities for such shipments. It is alleged that the conspiracy was devised to enable Armour & Co. and Swift & Co. to obtain complete information concerning shipments of their competitors and to exercise complete control over such shipments through the Jersey City yards to their own advantage and to the disadvantage of their competitors, whereby a discrimination and concession was practiced in their favor.

The following letter, written by Samuel W. Allerton, original lessee of the stockyards property, introduces the subject:

See J. B. T. $F\frac{32}{5}$

Highland Street, South Pasadena, California.

SOUTH PASADENA, CALIFORNIA, *January 13, 1912.*

MR. D. T. MCCABE,
3rd Vice President Pa. Co., Pittsburg, Pa.

MY DEAR MCCABE: I have just received a statement from Mr. Oliver [1] showing that we were three thousand cars short on the Pa. & Fort Wayne R. R. and about fifteen

[1] Agent for the P. R. R. in Chicago.

hundred cars on the P. C. C. & St. L. R. R. out of Chicago. We have made a big increase in our local business, but we are short out of Chicago 4,500 cars. The through cattle that are shipped out of Chicago are shipped mostly by S. & S.,[1] United Dressed Beef Co. and the New York Butchers' Association, and Ed. Marse [Morris], who bought out Stearns [Joseph Stern Sons, Inc.], who used to ship with us about 4,000 cars per year. The New York Central tried to get him away from us, but they could not do so, until they got Marse [Morris] to buy him out.

No man can ship cattle from Chicago to New York unless he has an abattoir.

We have to ship a few cattle in February to our butchers. We always expect to lose about $20 per car.

Now the real question is how are we going to make up this shortage. There is but one way to do it, and that is to get Armour in Jersey City, and then we will get the New York Butchers' Association's cattle which will put us in good shape and I feel sure then we will maintain our percentage for years to come.

I think next spring I can get Armour to take hold of Jersey City; our people want him but the trouble is that it will cost one and one-half million dollars to build an abattoir at Jersey City, and our people do not like to advance the money, and Armour does not lie [like] to put the money out on leased ground, but I think I could make an arrangement with Armour to lease the ground for the abattoir, and he build the abattoir, and the Pa. Railroad would take it off his hands at the end of the lease with two per cent depreciation, and I think our people would have to lend him about one-half the money to build it.

Legally he could not lease the grounds, but I could arrange with him to lease the ground and sell him most of the stock.

The lease of Jersey City runs out one year from next February, and it would probably take one year to build the abattoir.

Now I think that when you are in Philadelphia you ought to take this matter up with Mr. Thayer, because this is the only way we can increase our shipments out of Chicago.

I hope you and your family are all well. I never was better in my life than I am this winter.

Yours truly,

S. W. ALLERTON.

It appears from this letter of Allerton that he was intimately associated with the Pennsylvania Railroad, for he refers to the railroad company as "our people," and seems to have taken the initiative in this case because of his desire to bring additional traffic to the Pennsylvania Railroad Co. Another statement still further indicates his close relations with the Pennsylvania Railroad where he says "this is the only way we can increase our shipments out of Chicago." It appears that live-stock shipments over the Pennsylvania to Jersey City were falling off, and that the "one way" proposed by Allerton to increase this movement was for the Pennsylvania to hand over control of the stockyards to Armour & Co.

On September 27, 1912, A. W. McLaren, manager of the transportation department of Morris & Co., wrote the following letter to G. D. Dixon, vice-president of the Pennsylvania Railroad Co.:

MORRIS & CO., TRANSPORTATION DEPARTMENT,
Chicago, Ill., September 27, 1912.

Mr. G. D. DIXON,
Vice President, Pennsylvania Railroad Co.

DEAR SIR: Referring to my talk with you yesterday morning at your office in regard to the Jersey City Stockyards, at which time you advised me that the matter of making another lease was still open for negotiation and asked that I file with you a letter making application therefor, if we were interested:—

We would like to be considered as an applicant for these yards, and are prepared to make you a flat offer of $50,000 a year rent, on the understanding that present conditions will be maintained. This is an increase over what you are now receiving of a hundred per cent, as we are informed, and I trust is sufficient to justify your company in leasing the property to us.

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[1] Sulzberger & Sons' Co.

We hope nothing definite will be done towards closing this lease without our being included or an opportunity being given us to further discuss the matter.

Awaiting your favorable reply, we remain,

Yours truly,

MORRIS & CO.,
A. W. MCLAREN,
Manager Transportation Department.

File F. 32.

McLaren knew that the Pennsylvania Railroad was negotiating with Armour & Co. He knew also that the consideration for the lease of the stockyards had been $25,000. It was the desire of Morris & Co. to secure lease of this property and McLaren therefore offered the railroad company $50,000 per year in the hope that this increase of 100 per cent in the rental would be sufficient consideration to secure the yards for his company.

On the same day he wrote the following letter which presents the arguments that Morris & Co. brought to bear on the Pennsylvania Railroad Co. as an inducement for that company to lease the yards to Morris & Co. in preference to Armour.

Personal:

CHICAGO, ILL., *September 27, 1912.*

Mr. G. D. DIXON,
Vice President, Pennsylvania Railroad Co., Philadelphia, Pa.

DEAR SIR: Referring further to your application for the lease of the Jersey City stockyards, which we are informed will be renewed shortly for a long term, probably to tenants other than the present lessees.

As stated in my interview with you, we wish to be considered as applicants for this lease, and in view of the general situation and all the circumstances, we feel our application, if given favorable consideration, would result advantageously to the Pennsylvania Co.

In this particular, I would like to call your attention to the great number of live cattle which our company is shipping each week to New York City, to the Joseph Stern & Sons plant, which movement is controlled by us; also to the following table, which will give you an idea of the export movement of live cattle for the past 5 years, showing the position of this company as compared with its principal competitors:

	Morris.	Swift.	Sulsberger.	Armour.
1907	92,959	70,032	43,139	None.
1908	93,444	59,256	26,560	None.
1909	82,621	53,919	19,015	None.
1910	599942	38,702	12,266	None.
1911	66,003	42,220	23,784	None.

The interests controlling the 40th Street yards, [Western Stock Yards Co.] which are located in the heart of the West Side slaughterhouse district on Manhattan Island, are such that we can attach to the Jersey City Stock Yards the 40th Street yard.

This yard is the only large stockyard available on Manhattan Island which is owned by interests other then railroads, and over which we will exert a controlling influence during a long lease. This latter yard has dock facilities in connection with it, in the heart of the slaughterhouse district.

The traffic which you are now enjoying from other interests making application for these yards, can not be very much increased. They already control to a large degree your icing facilities which are very valuable and through which you are strongly allied, and the tonnage you are now enjoying can reasonably be considered as a maximum. Therefore, the forming of an alliance with our interest should be the means of bringing to your line a great additional tonnage, and these facts, we feel, should appeal to you as the traffic director of the Pennsylvania Lines, as to why it would be inadvisable to make any arrangement at Jersey City which does not con-

template our interests being included therein. I would like to talk to you further in the matter and trust that nothing will be done toward closing up this proposition without including us therein, or affording us an opportunity to further discuss the subject with you.

Yours very truly,

F. 32. A. W. McLaren.

According to the statement of McLaren in this letter, Morris & Co. appears to have regarded itself able to control the Western Stock Yards Co. to the extent of attaching it to the Jersey City yards (presumably in the sense that it could arrange to turn its traffic to the Pennsylvania); and this was held out as a special inducement to the Pennsylvania to lease the Jersey City yards to Morris & Co.[1]

On the same date, September 27, Dixon wrote the following confidential memorandum to D. T. McCabe, acquainting him with the visit of McLaren and indicating that he would probably try to use the offer of McLaren in an effort to secure a better deal with Arthur Meeker, of Armour & Co.

F. 32. September 27, 1912.

Confidential.

Mr. D. T. McCabe,
Fourth Vice President, Pennsylvania Lines,
Pittsburgh, Pa.

Dear Sir: I had a visit yesterday from Mr. A. W. MacLaren of Morris & Co. Evidently they have heard that we are working with Armour & Co. in the Jersey City matter. He was very persistent that we let them make a bid for this property, intimating that they could do a great deal more for us. Finally he said "Let us go into partners with Armour & Co."

I expect to meet Mr. Meeker in New York on Tuesday next and it is well to have this proposition before us, as it may enable us to make a better deal.

Yours truly,

Geo. D. Dixon,
Vice President.

W.

On October 2 Dixon wrote the following letter to Morris & Co., in which he states that the "negotiations have progressed so far with another party that I am not in a position to take up the question with you."

October 2, 1912.

Messrs. Morris & Co., *Chicago, Ill.*

Gentlemen: Referring to your letter of September 27, in regard to the Jersey City stockyards matter: we have been negotiating with another party in regard to this matter, and I find that the negotiations have progressed so far that I am not in a position to take up the question with you.

Yours truly,

George D. Dixon,
Vice President.

File F. 32.

The following letter, written by S. W. Allerton on October 9, indorses the action of Dixon in his communication of October 2 to Morris & Co. Allerton states specifically that Morris & Co. is an enemy of the Pennsylvania Railroad, and that the effort of the com-

[1] Whatever the control of the Western Stock Yards Co. may have been at that time (1912), the Jersey City Stock Yards Co. in January, 1918, reported to the commission that its president, R. C. Bonham, was also president of the Western Stock Yards Co. and in his individual capacity owned stock therein. The Jersey City Stock Yards Co. further reported that it delivers hogs destined to New York City to the yards of the Western Stock Yards Co.

It thus appears that Armour & Co. and Swift & Co. in securing the Jersey City Stock Yards lease were also able to attach to that yard the 40th Street Yard of the Western Stock Yards Co.

pany to secure the lease of the Jersey City yards was intended only for the purpose of tying them up.

S. W. ALLERTON,
757 First National Bank Building,
Chicago, October 9, 1912.

Mr. GEO. D. DIXON,
Vice President Pennsylvania Railroad Co.,
Philadelphia, Pa.

MY DEAR SIR: So far as Morris is concerned, he is on the New York Central where he expected to do all the business done in New York. He expected to clean us out in Jersey City, but we have the business and he has his own cattle and a few calves. He is an enemy of the Pennsylvania Railroad as he is tied up on another road, but he would like to do something to make trouble if he could, so I don't think you want to pay any attention to him as he is clearly and positively your enemy.

Yours truly,

S. W. ALLERTON.

Allerton from the beginning thought that Armour & Co. might be able to secure the interest of Swift & Co. in a lease of the yards, and these two packing companies would control by far the majority of the live-stock shipments into Jersey City. Accordingly, an effort was made early in the negotiations to secure the interest of Swift & Co. From the correspondence it appears that active effort to secure the interest of Swift & Co. was made by Arthur Meeker, of Armour & Co., and by Allerton himself. The following letter, written by Allerton to Dixon, of the Pennsylvania Railroad, November 2, 1912, is the first one referring to the efforts of the stockyards company to secure the interest of Swift.

F 32
5

S. W. ALLERTON,
757 First National Bank Building,
Chicago, November 2, 1912.

Mr. GEORGE D. DIXON,
Vice President Pennsylvania Railroad Co., Traffic Department,
Philadelphia, Pa.

MY DEAR DIXON: Mr. Meeker tells me that he thinks he can get Morris, S. & S., and Swift, all on our road. I tell him I think that would be a mistake as it would lead to a fight, and undoubtedly, would break the rates and be a general row.

What we really want is a good big share—full percentage of the business. Now am I right or would you like to have him attempt to get all this business? I think next spring, we probably will be able to get all Swift's business. That's the business the Lehigh Valley has from the United Dressed Beef Company which is now owned by Swift. Morris of course, is all alone, expecting to do all the business and now has lost it.

I think quite likely that Arthur Meeker might get Morris, but I think if he could get Swift, he is a much better man than Morris.

Yours truly,

S. W. ALLERTON.

On February 4, 1913, the memorandum that was to be used as a basis for formal contract between the parties was prepared. Copies of this memorandum were sent to the interested parties and approved by Arthur Meeker and G. B. Robbins of Armour & Co., and O. L. Sheppard, general superintendent of the Pennsylvania Railroad Co.

MEMORANDUM OF UNDERSTANDING WHICH WILL BE USED AS A BASIS FOR A FORMAL CONTRACT TO BE PREPARED BY THE LEGAL DEPARTMENT.

In view of the fact of Armour & Co. not spending the money on the Jersey City stockyard property as originally outlined, it is their intention to purchase the Halstead property, located at the corner of 17th and Cole Streets; and they wish to be relieved

of the former understanding as to expenditure on the Jersey City property, in lieu of which they agree:

First, that all live stock controlled or shipped by them, used in this packing establishment, will be shipped over the Pennsylvania system to Jersey City and slaughtered at that point.

Second, that any and all other traffic shipped in or out of the Halstead property, which is to be operated by Armour & Co., will be routed and forwarded via the Pennsylvania system, except where it is impracticable to do so.

It is understood that the operation of this Contract will be of the same duration as the Contract between the Jersey City Stock Yards Co. and the Pennsylvania Railroad Co.

February 4, 1913.

Copy to P. B. Prince with letter 2/5.

O. K.

A. MEEKER.
G. B. ROBBINS.
O. L. SHEPPARD.

The following comment was written in the margin to the right of the second agreement: "Want separate agreement between P. R. R. & *Armour & Co.* relative to this clause."

On April 28, 1913, Meeker, of Armour & Co., wrote the following letter to Dixon of the Pennsylvania Railroad Co. He states in it the probable reasons for the lack of interest on the part of Swift & Co. in the lease of the stockyards.

ARMOUR & CO.,
General Offices: Union Stock Yards,
Chicago, Ill., April 28, 1913.

Mr. GEORGE D. DIXON,
Vice President, Pennsylvania Railroad Co.,
Broad Street Station, Philadelphia, Pa.

DEAR MR. DIXON: I received the enclosed from Swift & Co.; have had a couple of meetings with them since, and Mr. Robbins has also seen them.

They say frankly that the present arrangement gives them splendid railway service, and they do not see how they can improve their position any financially by becoming interested in the Jersey City Stock Yards, from which I infer that they have recently made some very *favorable arrangements with the Lehigh Valley; just the nature of it I do not know*. We offered them a thirty per cent, interest in the yards, which is practically what we would have had had they accepted it; and that seemed to be satisfactory to them.

I regret the loss of their business for the railroad and for the Stock Yards Co., but I do not see how we could have done anything more than we did do in the matter.

Yours very truly,

ARTHUR MEEKER.

Meeker states in this letter that he infers that Swift & Co. have recently made "some very favorable arrangements with the Lehigh Valley." He says further that Swift & Co. were offered a 30 per cent interest in the yards. Apparently this offer was not sufficient to interest them. The italicized portion of the foregoing letter was underscored in the original.

On July 31, 1913, Meeker wrote Dixon of the Pennsylvania that he was finally successful in securing the interest of Swift in the Jersey City yards.

F 32
15

ARMOUR & CO.,
General Offices: Union Stock Yards,
Chicago, Ill., July 31, 1913.
ack 8/2

Mr. GEORGE D. DIXON,
Vice President, Pennsylvania Railroad Co.,
Broad Street Station, Philadelphia, Pa.

DEAR MR. DIXON: I am in receipt of yours of July 8th and will endeavor to get some more data on the subject mentioned. Many thanks for writing me so promptly.

You will be glad to know that after protracted negotiations we have gotten Swift & Co. interested in the Jersey City yards, and within a week are going to ship the cattle that they kill in their plant, 1st Ave. & 44th Street—about 400 per week—over the Pennsylvania, to the Jersey City yards, as well as all their small stock, that is sheep and lambs and calves which will run close to 10,000 head a week at the present time but will average about 7,000 to 8,000 for the year.

There is no possibility of getting their United Dressed Beef Co. cattle, as they have some kind of a deal with the Lehigh, particulars of which I could not get at, which is more favorable than anything we could offer them.

We have made this arrangement at considerable sacrifice to ourselves, in order to bring more freight to your road.

Yours very truly,

ARTHUR MEEKER.

It is very apparent from this letter that Swift & Co. had a very favorable arrangement with the Lehigh Valley. His statement that the arrangement with Swift & Co. was made at "considerable sacrifice to ourselves," seems to indicate that Armour & Co. handled the negotiations with the railroad company singly and later held out an inducement to Swift & Co. in order to secure their interest in the yards.

A few days later Allerton wrote the following letter to Dixon commenting on the efforts made to secure the Swift & Co. business:

S. W. ALLERTON,
757 First National Bank Building,
Chicago, August 4, 1913.
Ack 8/6

Mr. GEORGE D. DIXON,
Vice President, Traffic Department, Pennsylvania Railroad Co.,
Philadelphia, Pa.

MY DEAR DIXON: After a long siege of negotiations, we have succeeded in getting Swift's stock back on the road. I think, if you knew what it cost me, you would say I was a little foolish; but first, my ambition was to have the Pennsylvania Railroad carry more live stock out of Chicago and more live stock into Jersey City, and Swift was the only shipper possible for me to get. First, it was very important to have Swift and Armour as buyers in the Jersey City stockyards, as they brought S. & S. and Morris to the Jersey City stockyards. They could not afford to let Armour and Swift have all the local cattle, as they are always cheaper than through cattle from Chicago.

S. & S. have been ten years trying to build a market at Jersey City, but they could not get the commission men from us, and, consequently could not form a market. Second, Swift was a very important factor in Pittsburgh, as he bought a good many heavy hogs that he shipped to Boston, that we had really no trade for.

Your agent here, Mr. Oliver, came down to see me a good many times, urging me to get Swift back on the road, as he said that gave him some small cattle shippers who followed Swift, and when Swift was on our road, he was able to get a great deal of Swift's provisions, which amounted to more than the cattle, so he was very anxious that I get Swift back on the road.

I now feel pretty sure that the Pennsylvania Railroad will always get its full share of live stock into New York. We have been doing pretty well without Swift, but I hope we will now do better.

Yours sincerely,

S. W. ALLERTON.

This letter is interesting for it indicates that a liberal consideration was involved in order to swing the Swift & Co. business to the Pennsylvania. Allerton says definitely that "if you knew what it cost me, you would say I was a little foolish," from which it appears that the plan for leasing the yards was in the nature of a mutual give and take between the railroad company and the two packing companies.

On August 6 McCabe sent a letter to Dixon, which is interesting from the fact that McCabe says, "I am glad that Swift &

Co. concluded to go to the Jersey City yards, although I have no doubt that the Swifts insisted on conditions which made it advantageous to them to acquire an interest in the yards." He says further, "We are asking our people to look after it [Swift business] and see that it is given good service." He says also that "It is also important that the westbound empties be promptly returned." It is evident from these directions that the service secured by the big packers is due to very definite influence and does not entirely result from their large corps of traffic experts.

PENNSYLVANIA LINES WEST OF PITTSBURGH,
GENERAL OFFICE, PENNSYLVANIA STATION,
Pittsburgh, Pa., August 6, 1913.

From: G. D. Dixon, 8-2-13 (enclosures).
Subject: Swift & Co.—Acquisition of interest in Jersey City stockyards—Routing of Chicago-New York live stock via Pennsylvania.
Respectfully returned to: Mr. G. D. Dixon, vice president, Pennsylvania Railroad, Philadelphia, Pa.

This is confirmed by a letter which I have from Mr. Allerton on the subject; I have no doubt he has also written you. I am glad that Swift & Co. concluded to go to the Jersey City yards, although I have no doubt that the Swifts insisted on conditions which made it advantageous to them to acquire an interest in the yards. Mr. Hodgdon also has a letter from Mr. Oliver, our live-stock agent at Chicago, in which he says arrangements have been made for Swift to turn his business over to our lines commencing with the 4th of this month, and we are asking our people to look after it and see that it is given good service. I hope that you will do likewise. It is also important that the westbound empties be promptly returned.

D. T. McCABE,
Fourth Vice President.

On August 19, Robert C. Wright, freight traffic manager, wrote Dixon the following letter:

G. D. D. 8. 8.—Jersey City stockyards—Interest of Swift & Co. in.

THE PENNSYLVANIA RAILROAD CO.,
GENERAL OFFICE, BROAD STREET STATION,
Philadelphia, August 19, 1913.

OFFICE OF THE FREIGHT TRAFFIC MANAGER.
Mr. GEO. D. DIXON, *Vice President:*

Our people have been advised of this and our transportation department have made every preparation to handle the business in a manner satisfactory to Swift & Co., including the movement of westbound empties.

ROBT. C. WRIGHT,
RCWKy *Freight Traffic Manager.*

This letter shows the movement of westbound empties, previously referred to in McCabe's letter, was to be facilitated as much as possible.

The correspondence presents the history of an actual case which clearly indicates that considerations and concessions are made by railroads to secure packer business and that in return for such concessions the packers contract and agree to ship their live stock and product over the lines of the contracting railroad company. The packer is always on the lookout for the most advantageous arrangement he can make, while the railroad company, on the other hand, is after the traffic.

RATES.

The influence of the large packer on the railroads, resulting from the enormous freight tonnage under his control, has resulted in his ability to dictate to the carriers at times the rates which he shall pay for the handling of his products. An example of this is found in a

case with the Erie Railroad which arose out of certain charges to Swift & Co. for some shipments of fertilizer. Swift & Co. originally paid the rate of $3 per car, which applied on animal products shipped between the company's Long Island and Jersey City plants. It was later discovered that the tariff did not apply to fertilizer, for it could not be considered an animal product. Another tariff was therefore applied to these shipments whereby the charges to Swift & Co. were apparently increased in the sum of $511.72. The Erie Railroad then changed its tariff in order that future shipments of fertilizer might be made at the animal-product rate. Swift & Co. was not satisfied with this, but it desired to have the railroad company refund the excess which it had paid on the shipment which had been made before the tariff was revised. The company, therefore, presented a claim against the Erie Railroad for $511.72. It was found that this claim could not be paid, however, without bringing the matter to the attention of the Interstate Commerce Commission, which neither the railroad nor Swift & Co. deemed it advisable to have reviewed by that body. This situation is best explained in the following letters passing between Swift officials:

File A-14182.
Claim No. 110047—$511.72.

CHICAGO, *June 28, 1915.*

Messrs. F. H. FREDERICK,
P. J. SHAW.

GENTLEMEN: Mr. Cooke[1] talked to me very frankly regarding the claim we have against the Erie Railroad for approximately $512, as I remember it, overcharge on fertilizer shipment between Long Island and Jersey City. He makes the argument that they collected originally the wrong charges as shown by their tariff, and afterwards corrected their charges and collected the correct amount, and, then corrected their tariff to the amount that they had charged in the first place. He says the only way he can pay this claim, and I know we all agree with him, is to refer it to the Commission. He feels sure if he does this the commission, looking into the record of the case will find where they carried the freight at less than their tariff rate and that both of us will be fined and he thinks we had better drop it—both for our protection and theirs.

I would like to have your opinion on the matter.

A. R. FAY.

ARF-B
RR. Dept.

File X-132.
Claim 110047—Amount $511.72.
Private.

APRIL 1, 1915.

Mr. A. R. FAY,
R. R. Department,
Chicago, Ill.

DEAR SIR: Mr. Wilson A. G. F. A. Erie R. R. Co., called me in his office to-day relative to above claim for reparation (see PJS letter Feb. 8). Mr. Cooke had written a letter to Mr. Fay but decided not to send it as he could not clearly state what he wanted to consider and asked Mr. Wilson to express to me in person Mr. Cooke's opinion in the matter and convey it to Mr. Fay. These cars of Fertilizers were billed originally at the $3 per car rate and some time afterwards corrected to the 6th class rate that this fertilizer never was considered an animal product and consequently was not entitled to the $3 per car rate, and if we insist on this claim being allowed between the difference of the 6th class rate and the commodity rate of 90 cents per ton which was put in Sept., 1914, in going before the commission for permission to allow it, *it will open up this question of $3 per car rate and which Mr. Cooke is satisfied will be scrutinized very closely by the commission and declared a preferential rate in that it operates between two plants of Swift & Co. and Mr. Cooke is very much of the opinion we would*

[1] Of the Erie Railroad.

stand to lose the present rate of $3 per car on various commodities and the less that is said of this $3 rate the better. Certainly the Erie are not a bit enthusiastic in having it brought out in the limelight yet they do not want to do anything that is likely to disturb it while it is of benefit to us.[1] Mr. Cooke would be pleased to have this claim withdrawn.

Yours very truly,

SWIFT & CO. (INC.).
W. P. C.

RR. Dept.
WPC-C

This letter shows that Swift & Co. and the Erie Railroad Co. knew that this rate of $3 per car on animal products carried between two of the Swift plants was a preferential rate in favor of Swift & Co. It was apparent that the Erie did not care to disturb the rate so long as it was of benefit to Swift & Co.

A. R. Fay, of Swift & Co., apparently considered the proposition in just the same way as Cooke. He apparently thought it better for his company to waive this small claim of $511.72 rather than to bring to the attention of the Interstate Commerce Commission a rate which was at least questionable and which might be discontinued if reviewed by the commission. Fay decided to withdraw the claim against the Erie Railroad, as is shown in the following letter written by him to his assistant, F. H. Frederick.

CHICAGO, *March 13, 1916.*

Mr. F. H. FREDERICK,
Department.

File 756-ARF

Referring to the attached and to A-13888: Think we had better drop this claim against the Erie; Mr. Cooke feels, personally, very bitter about it.

A. R. FAY.

ARF-B

MIXING RULES.

Tariff revision.—It has already been pointed out in this report that the privilege of shipping a mixed car load of various products operates in favor of the large packers who have the variety of products to ship. Their competitors are unable to take advantage of the privilege because they do not manufacture such a diversity of products. Mixing rules are sometimes devised in accordance with the wishes of the large packer. An example of this is found in a recent tariff revision by the Erie Railroad Co. An item in the Erie tariff provided that on shipments from Buffalo, all articles loaded into the car, whether fifth class or otherwise, should go toward making up the minimum charge for the carload shipment. On shipments from Jersey City, on the other hand, only revenue from fifth-class articles should go toward making up the carload minimum. Swift & Co. desired to have the item in the tariff apply to shipments from Jersey City as well as from Buffalo. The following letter explains the situation.

MAY 18, 1916.
A-19989.

Application C. F. A. Mixing Rule No. 3 to Shipments from Jersey City and Harrison Plants via Erie Railroad.

Mr. HARRY WILSON, A. G. F. A.,
Erie Railroad Co., 50 Church Street, New York City.

DEAR SIR: Answering your letter of May 1, file Lag:

Rule 3, Item 250, Erie R. R. tariff B-70, provides that the revenue from any article loaded in the car, whether fifth class or otherwise, shall go toward making the mini-

[1] The italics are the commission's.

mum charge for the entire shipment which is 21,000 pounds at the dressed meat carload rate. The same rule in Item 248 applicable from Jersey City provides that only the revenue from fifth-class articles, or articles carried in the packing-house product list, shall go toward making the minimum revenue required for the car. Thus, if oleomargarine is loaded into a mixed car shipped from Jersey City, the revenue from such oleomargarine may not be used in making up the minimum revenue required for the car, but if oleomargarine is loaded in a car shipped from Buffalo, the revenue from such oleomargarine will go to make up the minimum required for the entire car.

It would be entirely satisfactory to us if Jersey City and Harrison were added as points of origin in the Buffalo rules carried in Item 250. If this is done, the rules as carried in Item 250 will meet our requirements and hope you can arrange to make this correction at the earliest possible date.

Yours respectfully,

SWIFT & Co.

ACO-PBB Per.

Compliance with this request was immediate. The assistant general freight agent of the Erie wrote to Swift & Co. less than one month later that the revision would be made and would be shown in the next supplement issued. This letter is as follows:

ERIE RAILROAD COMPANY,
New York, June 14, 1916.
File Lag.

Application of C. F. A. Mixing Rule 3 on Shipments from Jersey City and Harrison Plants via Erie Railroad.

SWIFT & Co.,
Union Stock Yards, Chicago, Ill.

GENTLEMEN: Yours of the 10th, file A-19989. Revision of Item 250 shown in our exceptions to the official classification will be taken care of in the next supplement to the above issue.

Yours truly,

H. WILSON,
Assistant General Freight Agent.

The change was actually made as suggested in the foregoing letter and became effective on July 25, 1916. Swift & Co. thus secured from the Erie Railroad compliance with its request and had the same in effect in less than 90 days from the date of making the request.

Evasion of embargoes.—The operation of the mixing rules not only gives the large packers the advantage of shipping less than carload lots of various classes of goods in a mixed car at less than the combined freight charges for the various articles if shipped separately, but it also enables them at times to ship goods upon which there are embargoes, and it thus secures for them transportation of embargoed products at times when it is impossible for their competitors to secure shipment of such products. The following letter, written by the F. W. Woolworth Co. to Swift & Co., indicates this practice:

NEW YORK, *December 5, 1917.*
D4-88

Messrs. SWIFT & Co., *Chicago, Ill.*
Attention of Traffic Department.

GENTLEMEN: Our attention has been directed to a method used by your "car route department" in forwarding less than carload shipments in through cars to cities where you make carload shipments, and make store delivery to your customers, and by pursuing this policy you are able to forward merchandise purchased in L. C. L. quantities to destination, when otherwise you would not be able to ship at all or if able to ship, shipments would be considerably delayed by reason of congestion and embargo.

We will be glad if you will give us in detail how your "car route department" operates, and further, whether or not in your judgment you could forward merchan-

dise ordered by F. W. Woolworth Co. not only in your through carload shipments, but also in your "peddler cars." We will be glad to cooperate with you in every way within our power consistent with our mutual interests in adopting any plan that will expedite the delivery of merchandise purchased from your company.

Yours truly,

F. W. WOOLWORTH CO.,
By C. L. HILLEARY,
Traffic Manager.

CLH 3-3

Swift & Co.'s letter to the traffic manager of the F. W. Woolworth Co., indicating its policy not to hold up goods on account of embargoes, is as follows:

JANUARY 4, 1918.
File A-21948.

F. W. Woolworth & Company, Soap.

Mr. C. L. HILLEARY,
T. M., F. W. Woolworth Co.,
Woolworth Building, New York City.

DEAR SIR: Referring to your letter of December 18, under your file D4-88. We beg to advise that our method of handling this business up to the present time and what we wish to continue is to ship all the Woolworth orders direct from Chicago where delay will not be entailed by this method. In a case of embargo on service from Chicago we have branch-houses deliver from their stock, also any orders they receive direct from the local Woolworth stores.

It seems to us the point that you are bringing up rests entirely on the various embargoes that have been made effective in the past from time to time, and we can assure you that it is not our policy to hold up any shipments due to any reason of embargo, etc., but that we want to expedite the movement all possible and will ship out of our Branch House stock or in the event of the Branch House not having any soap in stock we ship it to them to fill these orders with.

It is very satisfactory for us to ship Woolworth Co. in our peddler cars and we have been doing that in the past. However, we can't do that in all peddler car territory in that we only ship you from Chicago and don't have a supply at our various Western plants from which we made peddler car consignments—Chicago being the only plant at which we maintain peddler cars that we make shipments to your stores.

Yours respectfully,

SWIFT & CO.
Per

Trans. Dept.
FAC*PBB

While there is no direct statement in either of these letters to the effect that Swift & Co. was actually securing transportation of embargoed products by use of the mixed carload privilege and by shipment in peddler cars, yet the interchange of thought in the letters is indicative that such was the case.

Various arguments have been advanced both for and against the mixing privilege. Some contend that it results in a waste of refrigerator car space. They argue that nonperishable products should not be permitted to be mixed with perishables; that refrigerator space should not be used for nonperishable products. On the other hand, it is argued that if the packers were permitted to ship nothing but meat in their refrigerator cars a great deal of the car space below the hanging carcasses would be entirely wasted. Both of these conflicting arguments are valid, and it is difficult to state which is the more worthy of consideration.

The strongest point against the mixing privileges as they now operate is the advantage resulting to the large packers. They give that group of shippers a wide latitude of choice as to the products

which they may ship in a mixed carload. At times they result in better freight rates on some of the products than would be secured if those products were shipped separately. In such cases the packers have a competitive advantage over the individual producers in the various lines of business, who must ship their products separately. Moreover, refrigerator cars are given expedited service; they move more rapidly than ordinary freight equipment. The packer, therefore, who ships a mixed carload of perishables and nonperishables in a refrigerator car gets his nonperishable products handled with greater dispatch than the individual merchandizer who ships that class of goods alone in ordinary freight equipment.

CAR SUPPLY.

It has been reported from many sources that the Big Five packers secure from the carriers a larger share of the available supply of railroad equipment than they are equitably entitled to. It is claimed that in times of car shortage especially they secure an undue share of the cars available for distribution. The following telegram from E. C. Brown, president of the Chicago Live Stock Exchange, to Chas. J. Brand, chief of the Bureau of Markets, illustrates the point:

[Western Union Telegram.]

JANUARY 23, 1918.

MR. CHARLES J. BRAND,
Bureau of Markets, United States Department of Agriculture,
Washington, D. C.

The independent shippers to eastern markets of live stock are apparently being discriminated against by the railroads hauling stock east from Chicago. Two hundred cars of cattle will be held over to-night for lack of cars. Approximately 100 double decks of hogs were to be shipped from Chicago to-day but apparently none are shipped for lack of cars. The Big Five packers seem to be able to get cars from the western roads to load their cattle for eastern points. We can not understand why these cars from western roads are not distributed evenly between the Big Five packers and the independent shippers. A large number of cattle and hogs bought last Monday are still being held because railroads can not furnish cars. The railroads say they can not furnish cars although they are furnishing them to the packers. This state of affairs is absolutely intolerable and will have the effect if continued of discouraging the farmer and the producer more than any one thing that could happen on this market as it absolutely discourages competition between the independent buyers and leaves the control of the market entirely in the hands of the big packers. We are asking your departments for relief because we will have during the next 60 days heavier receipts of all kinds of live stock on this market than during any time the remainder of the coming year.

CHICAGO LIVE STOCK EXCHANGE,
[Signed] E. C. BROWN, *President.*

This telegram is dated January 23, 1918, when the shortage of live-stock cars was very pronounced. The president of the live-stock exchange alleges that the independent shippers who desired to ship their stock east were compelled to hold it up at Chicago. These delays were, of course, expensive to the shippers.

That the allegations in the above telegram were at least partly true, to the extent that Armour and Swift were being given a preference by the railroads in the use of stock cars at this time, is borne out by the following telegram sent by V. D. Skipworth, vice president of Wilson & Co., Inc., to Thomas E. Wilson, president of the company, on the day following the sending of Mr. Brown's telegram:

(Telegram.)

JANUARY 24, 1918.

T. E. WILSON,
Washington,

We have been having great difficulty especially past two weeks getting sufficient cars for our live stock shipments. Other packers as well as ourselves are shipping cattle from Omaha and Kansas City to the East and except in few instances Western lines refuse allow their cars to go through. This applies particularly to Santa Fe and Northwestern, although cattle is billed through to New York. They dump them out here and let us scramble for cars from here to New York. All stock cars outside of packer cars are supposed to be pooled each morning and distributed pro-rata. This has not worked out equitably, however, and recently we have got the worst of it. Yesterday Armour was in a hole for forty cars and the Milwaukee came to their rescue, although they would not do this for us or presume any other packer. Night before last eighteen cars cattle came in on Rock Island and through some special arrangement, Swift had switch engine ready and as soon as they were unloaded they grabbed the cars and sent them over to their chutes. Point I make is, railroads are under Govt. control and as such I do not think individual managements have any right to show any preference and local railroad administrator and his assistants should absolutely control the situation but so far they have failed to do so. My thought is unless we see immediate improvement we should send wire direct to Mr. McAdoo making complaint, or possibly you can get the information to him there that railroad affairs, particularly empty cars and especially during the extreme shortage are not being properly administrated—certainly not administrated as the Government wants it. We have been able to keep our New York plant going and think we will continue to do so, but it requires the time of all of us and all sorts of maneuvering to get any cars at all, whereas I do not think there should be any doubt as to equitable distribution of available equipment. New York Central openly showed their defiance of local Government regulations and say they will do as they please and get away with it.

V. D. SKIPWORTH, 11 am.

Following is correspondence from the files of Armour & Co. and Wilson & Co., Inc., relating to shortage of refrigerator cars at about the same date as Mr. Brown's telegram with reference to shortage of live-stock cars:

(Copy.)

The United States Food Administration, Beef Division, Chicago, has called the attention of Commission on Car Service at Washington, D. C., to shortage refrigerator cars to move meat shipments eastbound. The Commission on Car Service has advised this office giving us authority to arrange to pick up miscellaneous foreign refrigerator cars regardless of ownership to meet emergencies, on account of packers' cars being delayed in the east due to storm conditions. Everything possible is being done to hurry packers' cars west but in the meantime instructions should be issued to use available equipment to protect meat shipments for eastbound movement. Will you kindly arrange accordingly.

Yours truly,

[Signed] D. I. FORSYTH,
Vice-Chairman.

(Copy.)

CHICAGO, *January 23, 1918.*

Wire
L. G. Klingler, Kansas City
S. Sallyards, St. Joe.
W. J. Humpert, Omaha.
O. R. English, Sioux City.
F. A. Smith, National Stock Yards.

Owing to extremely congested condition Eastern Lines impracticable for them to switch out empty refrigerators from mass of loads and empties westbound. As result our cars are tied up on sidings and are liable to be indefinitely delayed. In meantime, extent you may be able to operate depends largely upon your individual efforts in securing foreign cars and utilizing to best advantage every car in sight. So long as weather remains cold, use box cars for canners, and you might find it necessary in order to supply nearby points to stack chilled beef in box cars or ship by trucks or electric lines, savings beef cars for long hauls.

Important you personally specialize on this outside work, putting on any assistants necessary to secure lion share of cars available.

Please acquaint manager with situation, letting us have benefit of any suggestions that may occur to him or you as helpful in this emergency and leave nothing undone at your end to keep things moving as outlook for beef cars very little if any improved since last week and Western plants will have to come pretty near taking care of themselves until Eastern Lines open up and we can get cars to you.

Reply by letter, letting us know just how you are lined up.

F. W. Ellis.

EF Copy sent
Cy mailed GBRobbins
AJFregeau VHMunnecke
Denver EWilson
JEO'Hern

JJCunningham,
Indianapolis.
CY-Mr. G. F. Laughlin Car Shops.

Confirming 'phone conversation, please wire all shops to speed up in repairs and rebuilding in order to utilize every car to fullest extent in present emergency.

WBC
JBS

F W E

EPH
to note

(Telegram.)

Jan. 25, 1918.

T. E. Wilson
Washington

Forsythe received Director General's orders to give packers preference on railroad refrigerator cars but does not understand that it supercedes order of Commissioner on Car Service dated January 17th whereby all western lines were instructed to rush their refrigerators to the Green Bay & Northern and Soo Line for delivery to the Great Northern for loading apples and potatoes. This also applied to Pacific Fruit Express and Western railroads are still sending these cars up that way in preference to giving them to the packers. Director General should see that Commissioner on Car Service order January 17th is rescinded or modified.

V. D. Skipworth. 4:30 p. m.

(Copy.)

Feby. 13, 1918.

My Dear Mr. Armour.

We have 129 foreign cars at the Chicago plant to-day and all plants during the recent car shortage have been working under positive instructions to specialize on outside work—putting on assistants necessary to secure lion share of railroad cars available.

Yours truly,

[Signed] F. W. Ellis.

Mr. J. O. Armour.
EF

It is fair to call attention to the fact that the foregoing correspondence occurred during the first few weeks of 1918, just after the railroads had been taken under Federal control, when the transportation situation was very difficult by reason of weather conditions and congestion and when the extreme necessity for expeditious movement of foodstuffs for export to the Allies was the primary consideration.

OTHER PACKER INFLUENCE.

Abandonment of Hodge stockyards.—In many other ways the influence of the large packers on the railroads has been exerted to secure special advantages. It has been a means of building up their interest in the stockyards and live-stock markets. An example of this is found in the case of the closing of the Hodge stockyards at

Fort Worth, which were until recently operated by the Missouri, Kansas & Texas Railway Co. in competition with the Fort Worth yards which are controlled jointly by Armour & Co. and Swift & Co. The Hodge yards were handling considerable business which the Armour and Swift interests desired for their Fort Worth yards. The following letter will serve to introduce the case:

CHICAGO, *December 27, 1916.*

Messrs. LOUIS F. SWIFT, EDW. F. SWIFT.

GENTLEMEN: Mr. J. L. Harris, general live-stock agent of the Alton Railroad, reports that in conversation with Vice-President Haile of the Missouri, Kansas & Texas Railroad in St. Louis last Wednesday, the 20th, Mr. Haile was asking him to try to secure the Fort Worth packing-house business for the M. K. & T. and Alton route,—and Harris told Haile that it was no use in trying to get the packer's business at Fort Worth as long as the M. K. & T. maintained a stockyards at the very gates of Fort Worth yards. Then there resulted a discussion of the matter, Harris says—and Haile finally told him if the packers still wanted the Hodge yards that he would bring it about so that they could have them, either by purchase or rental. He asked Harris to find out if the Fort Worth interest still wanted these yards.

I spoke to Mr. Dunham over the phone about it, and he said he would like to look the matter up and suggested that I send word back to Mr. Haile that we would look the subject up and would take it up with him later.

This is for your information.

A. R. FAY.

ARF:B
Transp. Dept.
Individual letters.

This letter shows that the vice president of the Missouri, Kansas & Texas Railway was somewhat concerned because his road was not getting its proportion of the packers' business from Fort Worth. A representative of the Chicago & Alton Railroad, which was also interested in the traffic, suggested to the official of the Missouri, Kansas & Texas that it would be impossible for that road to get any of the traffic so long as it continued to operate the Hodge stockyards "at the very gates of Fort Worth yards."

Even the suggested concession of letting the packers purchase or rent the Hodge yards was not entirely satisfactory to the Swift interests. They apparently thought it might be possible, if they should unite with the Armour interests in bringing pressure to bear on the Missouri, Kansas & Texas Railway, to prevail upon the road to close the yards. This would naturally be more advantageous to the packers than their purchase or lease of the yards. This situation was explained in the following letter written by A. R. Fay of Swift & Co. to R. J. Dunham, vice president of Armour & Co.:

CHICAGO, *December 30, 1916.*

Mr. R. J. DUNHAM,
Continental Commercial Bank Building, Chicago, Ill.

DEAR SIR: It looks as though we might prevail upon the Missouri, Kansas & Texas Railroad to close the Hodge yards, if your traffic department and ours will unite in pressure on the Missouri, Kansas & Texas. I believe this will be more desirable than for the Fort Worth stockyards to buy or lease them. Do you agree?

Please reply.

Yours respectfully,

A. R. FAY.

ARF:B
CC L. F. Swift.
E. F. Swift.

A short time later Fay again saw Harris of the Chicago & Alton. It was apparently arranged to have Harris explain to Haile that if he wanted to secure a proportion of the traffic for

his roads it would be advisable for him to arrange to have the Hodge yards closed. Fay advised Ellis, of Armour & Co., of this situation in the following letter:

CHICAGO, *January 8, 1917.*

Mr. F. W. ELLIS,
Union Stock Yards, Chicago, Ill.

DEAR SIR: Regarding the "Katy" Hodge yards at Fort Worth I met Mr. Harris to-day,—he goes to St. Louis to-night, and is going to tell Mr. Haile that if he wants to stand in well with the packing houses at Fort Worth he will close their Hodge yards and allow the "Katy" live stock to go through the Fort Worth stockyards the same as all other Fort Worth lines do. Thus placing the M., K. & T. on a parity with other competing lines.

Yours respectfully,

A. R. FAY.

ARF:B
Copy—LFS EFS

Mr. Haile, vice president of the Missouri, Kansas & Texas, apparently decided to act upon the suggestion of Fay, for the latter soon advised Ellis, of Armour & Co., that he had the promise of the Missouri, Kansas & Texas officials that the yards would be closed within a short time. Fay's letter to Ellis was as follows:

MARCH 27, 1917.

Mr. F. W. ELLIS,
Union Stock Yards, Chicago, Ill.

DEAR SIR: Regarding the Hodge stockyards: I have the promise of the Katy people that these yards will be closed and dismantled inside of three or four months.

Yours respectfully,

A. R. FAY.

ARF-LMC
CC–Messrs. L. F. Swift,
E. F. Swift.

This situation was further explained and corroborated in a letter written by Fay to Louis F. Swift on June 20, 1917. In this letter Fay stated that the officials of the Missouri, Kansas & Texas Railway were giving instructions to abandon the Hodge yards at once. Mr. Fay also stated that in consideration of this, Armour & Co. and Swift & Co. had agreed to give the Missouri, Kansas & Texas a certain part of their shipments from the Fort Worth plant. The letter is as follows:

JUNE 20, 1917.

Mr. LOUIS F. SWIFT:

Mr. Harris reports this morning that at an interview with Vice President Haile, and Vice President Webb, both of the M., K. & T. Railroad, that Mr. Webb, the operating vice president, was given [giving] instructions to abandon and demolish the Hodge stockyards at once.

This will do away with the competition we have had at the gate of the Fort Worth yards for all these years.

In consideration of this, Armour and ourselves have agreed to give the M., K. & T. our shipments on the fast train from the Fort Worth plant, Tuesdays and Thursdays of each week, as long as the rate and service via the M., K. & T. are equal to that of the other lines.[1]

I feel quite sure you will be pleased to know that this competition is going to be discontinued.

I am sending a copy of this letter to Messrs. Dunham, Donovan and Googins.

A. R. FAY.

ARF-LMC.

The correspondence shows clearly the desire of a particular road for a proportion of the packers' traffic in which that road had not been sharing. It shows how the packers were able to secure an

[1] The italics are the commission's.

advantage for themselves because of this desire of the carrier. The yards were abandoned, as was contemplated in the correspondence. As a result of the closing of the Hodge yards the Missouri, Kansas & Texas deliveries at the Fort Worth yards in October, 1917, showed an increase of more than 100 per cent over the same month in 1916.

Denver Union Stock Yard Co.—Another stockyards case showing the close relation between the large packers and the railroads is to be found at Denver. The Denver Union Stock Yard Co. is owned jointly by Armour & Co. and Swift & Co. The stockyards company assesses a charge of $1 per car for each loading and unloading of live stock in the Denver yards. This is a very high rate; the usual charge for a similar service at other points is 50 cents per car.

Correspondence found in the files of Armour & Co. shows that all parties concerned knew that this rate was too high. About the year 1904 or 1905, the various roads were endeavoring to reduce the charge to 50 cents per car. In order to induce the Chicago, Burlington & Quincy Railroad and the Colorado & Southern Railway to withdraw from the combination of roads attempting to bring about a reduction in the charge, the stockyards company agreed to refund to the two roads mentioned 50 per cent of the charges assessed against them for the service. Payments of this refund were made to the Colorado & Southern Railway, in accordance with this agreement, until the year 1906. Acceptance of the refund on the 1907 business was refused by the Colorado & Southern on February 15, 1908, on the ground that counsel for the railway company considered that the transaction was illegal. The case was closed, so far as the Colorado & Southern was concerned, until April, 1913, when officials of this company learned that the Burlington had been accepting the refunds throughout the preceding period of years. Mr. Arthur Johnson, general freight agent of the Colorado & Southern Railway, then notified the Denver Union Stock Yard Co. that, since the Burlington had been accepting these refunds throughout the entire time, he saw no reason why his company could not also legally accept the same, and he therefore intended to have bills prepared for all business transacted since the year 1906.

In the meantime, however, the officials of the stockyards company were beginning to doubt the legality of the payment of these refunds. The bills rendered by the Burlington, covering the business transacted during the months of September, October, and November, 1912, were refused by the stockyards company on the ground that it was the opinion of counsel that the transaction was illegal and should be discontinued. A year of correspondence regarding the legality of the arrangement finally resulted in the following conclusions:

1. The Denver Union Stock Yard Co. is not a common carrier and therefore is not required, nor would it be permitted, to file a tariff of its loading and unloading charges with the Interstate Commerce Commission.

2. The statement in the Chicago, Burlington & Quincy Railroad tariff that "on carload shipments of live stock to or from the Denver Union stockyards, the Chicago, Burlington & Quincy will assume stockyards charges not in excess of $1 per car for loading and unloading respectively," is simply for the purpose of advising shippers

that the railroad has adopted these facilities as its own and does not constitute an agreement on the part of the railroad company to pay $1 per car to the stockyards company for the performance of the service.

3. There is nothing in the act to regulate commerce to prevent the Chicago, Burlington & Quincy Railroad from procuring these facilities at the stockyards on any terms that may be mutually satisfactory.

It is evident that all the parties involved in the transaction agreed in the conclusion that there was nothing illegal about the payments of these rebates and that they could, therefore, be reestablished. The following agreement of settlement among the parties was reached on May 29, 1914:

1. The Denver Union Stock Yard Co. should pay the Chicago, Burlington & Quincy Railroad refunds on all back business—that is, since September, 1912, when payments had been discontinued.

2. No payments should be made to the Colorado & Southern Railway on business transacted prior to January 1, 1913.

3. The stockyards company should pay the Colorado & Southern Railway a refund on all business transacted since January 1, 1913.

4. The stockyards company should continue to pay to both the Chicago, Burlington & Quincy Railroad and the Colorado & Southern Railway the refund on all future business.

This agreement was carried out and the refund is still being paid by the Denver Union Stock Yard Co. to the two railroad companies. It is important to note that the Denver Union Stock Yard Co. is now collecting $1 per car from most carriers for performing a service which is usually secured for 50 cents; that all parties concerned in this transaction apparently know that this rate is too high; that the carriers were about to form a combination a number of years ago to force the stockyards company to reduce the rate; that, rather than suffer a reduction in the charges to all the lines, the stockyards company entered into secret agreement with the Chicago, Burlington & Quincy Railroad and the Colorado & Southern Railway to refund to these two roads 50 per cent of the amounts collected from them for the performance of the service of loading and unloading stock within the yards. By granting to two roads a secret concession, the packers were able to collect from the other lines an excessive rate for the performance of a part of the transportation service. This secret agreement was an advantage to the contracting parties and a detriment to the interests of all other parties concerned. By this agreement the contracting lines were assured that they would secure the service at a reasonable rate. Armour & Co. and Swift & Co., on the other hand, were assured that they would be able to continue to assess against all other companies the unreasonable rate.

Ellis bumping post.—The packers' influence on the carriers is also used as a means of pushing the sale of some of the products of their affiliated companies. An example is found in the Ellis bumping post, a product of the Mechanical Manufacturing Co., which is controlled by the Swift interests. The sale of this product for the fiscal year ending March 31, 1918, was $249,715.60. Correspondence found in the files of Swift & Co. indicates that the packing company uses its traffic influence to induce the carriers to buy this post. The following letters, passing between officials of Swift & Co., show the

disposition to push the sale of the Ellis post, through enlisting the aid of A. R. Fay, transportation manager of Swift & Co., who has charge of routing its traffic:

APRIL 14, 1915.

Mr. GEO. L. CHATFIELD:

I noticed all along the Michigan Central Road that they are using some kind of a steel bumper. Would like to know if they have discontinued using the Ellis entirely and using only the steel and *if there is not some way we can get them to buy the Ellis.*[1]

NBH*EM
CC–A. R. Fay.
4467

MAY 4, 1915.

Mr. N. B. HIGBIE, *Fourth Floor, Office.*

DEAR SIR: Replying to your note of April 14, and referring to conversation with you regarding Bumping Posts on the Mich. Cent. R. R., wish to advise that I have been checking up this matter and have not been able to get as much information as I would like, but it is evident from what I have that they have been buying a number of Gibraltar, Hercules and Buda Bumping Posts. Also understand they are fitted up at their Jackson shops for making repairs for our bumping posts, some of which have been in service a number of years. Have not been able to learn that they have made any complete Posts. I am also advised by one of their representatives that they have not bought any new Posts for a long time but he thought they would need some within a few months. I am taking this matter up with Mr. A. R. Fay.

As to the Bumping posts on the Illinois Central—their business runs about even, and I have been assured by their Purchasing Agent that we are getting all of their business and have not been buying any other posts.

Yours respectfully,

GEO. L. CHATFIELD.

GLC*B

Fay was apparently able to induce the Michigan Central Railroad to buy the Ellis post, for he reported to Chatfield about two months later, as follows:

CHICAGO, *July 30, 1915.*

File 568–ARF.

Mr. G. L. CHATFIELD, *Fourth Floor:*

The Michigan Central have promised that they will purchase Ellis Bumping Posts, and they will buy mere [more] posts in the next year on their line than they have in the last 10 years.

ARF: B A. R. FAY.
R.R.DEPT.
Copy H.A.C.

There is no direct statement in this correspondence to the effect that Swift & Co. told the Michigan Central Railroad Co. that it must buy the Ellis bumping post or suffer a loss of traffic. It is within the limits of reasonable inference, however, that the "traffic club" was brought into play and that Swift & Co.'s traffic, rather than the worth of the product, was the controlling factor in the Michigan Central's decision to use the Ellis bumping post.

The Harvey Co.—The packers attempt to extend their influence over the railroads to other companies which are closely affiliated with the carriers. An example of this is found in the effort made by Swift & Co. to sell provisions to the Harvey Co., which operates a line of restaurants on the Santa Fe system. Swift & Co. attempted to get this business by appealing to the officials of the Santa Fe. It is evident from the correspondence taken from the files of Swift & Co. that it considered that it was being discriminated against in the matter of the Harvey business. It seems that Morris & Co. was

[1] The italics are the commission's.

always given the contract. A. R. Fay, who as transportation manager of Swift & Co. had the routing of the Swift traffic, wrote to F. B. Houghton, freight traffic manager of the Santa Fe, and asked for his cooperation in securing for Swift & Co. its due share of the Harvey business. Fay's letter follows:

cc–R. A. Stearns.
Personal.
File 301–ARF.

MAY 21, 1914.

Mr. F. B. HOUGHTON,
F. T. M., A., T. & S. F. Ry. Co., Chicago, Ill.

DEAR SIR: We are in the packing-house business, as you have perhaps heard, and manufacture all kinds of meat supplies, among them Premium Hams and Bacon, than which there is no better. We are successful in selling many railroads more or less of their supplies of this class of goods, and we have quoted Mr. Harvey a great many times, but never get any business from him. If we treated the Santa Fe the same way Mr. Harvey treats us, on our shipments, the Santa Fe would not have any of our business.

Our people are restless over this situation. We would like to supply the first-class roads of the country, because we make first-class goods; and we don't like to be in the position of not supplying the Santa Fe a fair share of our goods. I think you can realize the feeling of our people, and they can't understand why I can not get you to have Mr. Harvey give us a fair show at the Ham and Bacon business.

It is up to you to help me out of the embarrassing situation in which I find myself. Please reply.

Yours respectfully,

SWIFT & CO.,
Per A. R. FAY.

ARF–B

It is evident from this letter that Swift & Co. was expecting the influence of its transportation manager or the traffic manager of the Santa Fe to be sufficient to result in the purchase of Swift supplies by the Harvey Co.

The Santa Fe was of course willing to do anything it could for Swift & Co., for the latter was a large shipper over the Santa Fe lines. Houghton wrote to Fay and suggested that the latter call on H. L. Benjamin of the Harvey Co. the next time he was in Kansas City. He thought that both gentlemen were good traders, and that they could probably get together. Fay relates his interview with Benjamin in a letter written to Houghton, as follows:

File 301–ARF. MARCH 3, 1915.

Mr. F. B. HOUGHTON,
F. T. M., A. T. & S. F. Ry. System,
Chicago, Ill.

DEAR SIR: Thank you very much for your letter of introduction to Mr. H. L. Benjamin of the Harvey Co. Mr. Stearns, the head of our hotel and dining-car supply department and I were in Kansas City on Monday; but Mr. H. L. Benjamin was under the weather and not available and we saw Mr. David Benjamin and presented your letter to him.

We regretted to find that there was very little prospect of our being able to do any business with the Harvey people. I explained to Mr. Benjamin that it was the practice of all roads, East and West, to use their purchasing power with shippers to secure traffic; all of which, of course, is a perfectly legitimate and legal basis, and that the Santa Fe was at a disadvantage in this respect unless his concern gave some consideration to the shippers via the Santa Fe System. He immediately told me that this would not cut any figure with him. The most I could get him to do was to write to his man in Chicago to give us some consideration—I don't know whether he did this or not. I told him that I thought it was only fair that at equal prices we should have the business part of the time. He didn't agree or disagree to this statement,

except to say that one of our competitors would have the preference at equal prices on the smoked meat and lard, because that competitor furnished the fresh meat under the contract.

The position that Mr. Benjamin takes I think is unfortunate both for the Santa Fe and for us.

Yours respectfully,

SWIFT & CO.,
Per A. R. FAY.

ARF–B.
CC–R. A. Stearns.

It is apparent that Swift & Co. did not accomplish a great deal by its effort to secure the Harvey business through the Santa Fe. The letter just quoted was written in March, 1915. Swift & Co. did get the business for the following September, but only by bidding 1¼ cents under the prevailing market price on bacon and 1 cent on ham. It is apparent from the correspondence that the officers of the Harvey Co. are not at all influenced by the volume of tonnage which a shipper may be able to offer to the Santa Fe. The correspondence is interesting, however, in that it shows the willingness of the Santa Fe officials to cooperate with Swift & Co. in an effort to secure for them a portion of the Harvey business.

Account of St. Joseph & Grand Island Railway Co.—Another apparently unsuccessful attempt of Swift & Co. to secure business for one of its affiliated companies through its influence upon the carriers is found in its effort to secure the account of the St. Joseph & Grand Island Railway Co. for the First National Bank of St. Joseph, Mo., which is largely owned and controlled by the Swift family. In this case Fay, of Swift & Co., wrote to J. A. Monroe, vice president of the Union Pacific, stating the reasons why the St. Joseph & Grand Island account should be placed with the First National. Fay's letter to Mr. Monroe is as follows:

Swift, ARF 1088. CHICAGO, ILL., *February 12, 1917.*

Mr. J. A. MONROE,
Vice President, Union Pacific System,
Omaha, Nebr.

DEAR MR. MONROE: I have your letter of the 8th, and complying with your suggestion in the last paragraph of your letter, would say that I do not agree with you that it is satisfactory, under the circumstances that the St. Joseph & Grand Island account should stay with the Teetle-Lemon[1] Bank. The First National Bank of St. Joseph was largely owned and controlled by G. F. Swift and associates; anybody that knows the history of St. Joseph for the last fifteen years knows what G. F. Swift and his associates have done for St. Joseph, and what they are still doing; and the Rrs. have directly benefited to an enormous extent by the increased business that Mr. Swift has brought to St. Joe, practically Mr. Swift put St. Joe on the map, and I think it is as little as the St. J. & G. I. can do for Mr. Swift and his associates is to give him their account.

I don't want to draw any comparisons, but I think it will be evident to you that the Swift people have done much more for the development of St. Joseph as a freight producing point than the bank that now has the St. J. & G. I. account.

Yours respectfully,

ARF. (Signed) A. R. FAY.

Fay argues that, since Mr. Swift has "put St. Joe on the map" he thinks that the St. Joseph & Grand Island Railway is indebted to Mr. Swift, and that it should reciprocate to the extent of giving to the First National Bank its account. The appeal was made to a Union Pacific official because the Union Pacific Railroad Co. owns a major-

[1] Tootle-Lemon.

ity of the capital stock of the St. Joseph & Grand Island. The effort apparently did not produce results, for the railroad officials did not agree with Fay that the account should be changed. The letter is typical, however, of the efforts of the large packers to exert their influence upon the carriers to secure special advantages to themselves and their affiliated companies.

PACKER COOPERATION.

I. C. C. Private Car Case.—Cooperation among certain of the Big Five packers has already been shown in their relations with the carriers. They also cooperate in legal matters pertaining to their private car line business. Previous to a recent hearing of the Interstate Commerce Commission in the matter of private cars, the Big Five packers held meetings and agreed upon the main arguments to be presented by them in that proceeding. Reference to such a meeting is found in a letter written by A. R. Fay, of Swift & Co., to the various transportation representatives of the other large packers. The letter is as follows:

CHICAGO, *December 26, 1917.*

Messrs. F. W. ELLIS, *Armour & Co.;* A. W. MCLAREN, *Morris & Co.;* J. A. MCNAUGHTON, *care Cudahy Packing Co.;* V. D. SKIPWORTH, *care Wilson & Co.*

DEAR SIRS: Referring to the private car hearing, which is to be opened at 10 o'clock, February 4, at the Sherman House:

It seems to me that we should have a conference on this subject, on the earliest date possible, to determine what line of action we are going to take, and to get ready for it.

I think the way we are tied up with other matters at the present time, that possibly Thursday, January 3, will be as early as we can hold a meeting. Please say if this is agreeable to you, and where you would like to have the meeting held. Would be pleased to have it at this office, but on account of moving, we haven't any suitable place for it, unless we had it at our city office.

Yours respectfully,

A. R. FAY.

ARF VMF

The meeting suggested by Fay in this letter was arranged and held in the offices of Armour & Co. on January 4, 1918. At that time the packers' representatives came to an agreement on 6 of the 12 points which were to be considered in the hearing. Another meeting was later held, January 8, to agree on the remaining 6 points. R. O'Hara, of Swift & Co., advised Fay of the results of the meeting of January 4, in the following letter:

JANUARY 5, 1918.
A-12624.

Mr. A. R. FAY, *Department.*

At a meeting in Armour's office January 4, we discussed some of the items that are to be considered by the commission at the private car hearing on February 4.

On No. 1, it was agreed that the witnesses who testified at the former hearing should have information compiled by the accounting departments in the car line end of it, from which data the witnesses will be able to testify what the conditions are at the present time relative to the private car line situation.

On No. 2, it was decided that the packers were not particularly interested. Armour Car Line will, of course, look after the Fruit Growers Express end of it.

On No. 3, it was decided to take the stand that was taken in the previous case: That tank cars or refrigerator cars are not special equipment; that any car that is in general use should not be considered special equipment; but under no circumstances should any of us be agreeable to the service charge for the use of the car in addition to the freight rate assessed for the transportation of the commodities

On No. 4, it was decided to contend that "unless the common carriers do furnish the kind of equipment desired by shippers which are in general use, the shippers

should have the privilege of negotiating with the owners of equipment for the use thereof."

On No. 5. The private car owners not being common carriers should not be required to file a tariff with the Interstate Commerce Commission. It was thought that the present practice should not be changed unless and until the common carriers are required to furnish the class of equipment generally in use should they be ordered by the shippers.

On No. 6, it was the consensus of opinion that the mileage allowance basis is the most desirable; that it should be stated that we do not know whether 1 cent mileage allowance is sufficient compensation or not for the reason that we have not been given the opportunity of testing that charge under normal conditions. In this connection, you could cover the mileage allowance situation on transcontinental traffic wherein we are allowed less than 1 cent per mile for the use of refrigerator cars. I will compile an exhibit showing just what each line allows for your presentation at the hearing.

These were all of the items that we discussed and it was decided to have another conference in Armour's office at 10 o'clock Tuesday, January 8, and after that conference, I suggest that you call a conference in your office between Messrs. Rynder, Smithwick, Telfer, Thompson and Vilum, so that these gentlemen may get together any data that you desire for the hearing on February 4.

R. O'HARA.

ROH F

The representatives of the Big Five packers were able to come to an agreement on each of the 6 points to be argued before the commission. One of the interesting points of issue at this time, which was discussed at this first meeting but which was not considered in the foregoing letter, was the question whether the operation of icing stations by private individuals and corporations should be permitted. On this point the interests of the Big Five packers did not coincide. Armour & Co., Swift & Co., and Morris & Co., all of whom had an interest in privately owned icing stations, desired to continue private ownership. The Cudahy Packing Co. had no interest in any icing stations and desired to have the carriers perform all the icing service. It was stated in chapter 4 that The Cudahy Packing Co. protested strongly against private ownership of icing stations at the earlier hearing of the private-car case in 1913. Armour & Co., Morris & Co., and Swift & Co., of course, desired to have The Cudahy Packing Co. change its attitude toward the private ownership and operation of these stations. O'Hara wrote to Fay concerning this phase of the situation as follows:

JANUARY 4, 1918.

Mr. A. R. FAY, *Department:*

At the discussion of the private car case in Armour's office to-day, Mr. McNaughton of Cudahy handed Mr. Ellis and the writer a copy of their brief which they filed in the private car case, based upon the testimony adduced at the prior hearing. With specific reference to the question of the ownership of icing stations and facilities by other than common carriers, Mr. McNaughton desires us to point out wherein we consider this testimony in the previous case improper, and I am under the impression that unless the present operators of the private icing stations and facilities permit Cudahy to share the ownership thereof, Mr. McNaughton will take the position at the coming hearing on February 4, that will result in the icing stations being taken away from the present operators and turned over to the carriers, which will result in first, an increase in the icing expenses of our property from the present basis of $2.50 a ton, including the cost of salt and labor, to a basis materially in excess thereof; second, it will result in the elimination of whatever profits the present operators are making from the ownership of these icing stations.

Mr. McNaughton realizes that increased cost of icing will result from the ownership of all icing stations by the carriers, but we know he is not bluffing because he is on record in the previous hearing of this case against the operation of icing stations by other than common carriers, and his company can afford to stand an increase in icing expenses on their small amount of traffic, if at the same time the larger volume of traffic shipped by Swift & Co. and other packers is taxed the same increased cost per ton.

His position at the previous hearing of this case could be covered up very nicely as a different examiner is hearing the case, and we could fix it in such a way that he would not delve into old voluminous record by a statement at the close of the hearing that the packers' position is as stated at this hearing and is the testimony in modified form on which the packers desire the case decided.

By dividing the ownership of the icing stations with Cudahy, the present operators stand a good chance of being permitted to continue the operation thereof but unless this is done, the result will surely be that the carriers will be ordered to operate their own icing facilities by the Interstate Commerce Commission.

R. O'HARA.

ROH-F.

It is apparent from this letter that O'Hara thought it would be necessary for the other packers to divide the ownership of their icing stations with The Cudahy Packing Co. in order to secure this company's indorsement of the other packers' argument that private ownership of such stations should be continued. It developed, however, that O'Hara was not correct in this conclusion. The Cudahy Packing Co. did not desire to share in the ownership of these stations, but was willing to conform to the wishes of the other packers by withdrawing its objection to private ownership. This situation is explained in the following letter written by A. R. Fay of Swift & Co. to F. W. Ellis of Armour & Co.

CHICAGO, *January 24, 1918.*

Private.

Mr. F. W. ELLIS,
Care Armour & Co., U. S. Yards, Chicago, Ill.

DEAR SIR: For your information, only, I had a talk with McNaughton to-day, and developed that he does not want an interest in your ice houses or ours, and he has agreed, with Mr. Cudahy's approval, that they will not take any part in the icing-station matter in the private car hearing, February 4, except to answer questions that may be asked them by Brown, and they will make no effort to have the matter brought up. They are willing to let it drop entirely, if the examiner will.

This is about all we could ask them to do, and I think is very fair. We could hardly expect them to make a public retraction of the stand they had taken previously.

Yours respectfully,

A. R. FAY.

ARF/VMF.

This letter shows that The Cudahy Packing Co. was willing to waive a point which would be of advantage to themselves but a detriment to the interests of three of the other large packers. In spite of the fact that The Cudahy Packing Co. did not argue against the private ownership of icing stations in the hearings in the year 1918, the Interstate Commerce Commission decided in its final disposition of the case on July 31, 1918, that such ownership should be discontinued.

The watchfulness of the big packers, as exercised in concert, is shown by their correspondence. The following letter was written by A. R. Fay of Swift & Co. to the traffic managers of the other Big Five packers:

CHICAGO, *January 4, 1918.*

Messrs. F. W. ELLIS, A. W. MCLAREN, J. A. MCNAUGHTON, V. D. SKIPWORTH.

DEAR SIRS: On Wednesday I induced Mr. Burnham [1] to write to Mr. Holden,[2] calling his attention to the proclamation of the President putting private cars under Government control, and suggesting to him that he bear in mind the efficiency that

the packers get in the operation of their cars, and the desirability of allowing the packers' cars to remain with them unmolested.

As Holden is directly next to McAdoo, thought it might have a good effect.

This for your information.

Yours respectfully,

A. R. FAY.

ARF*VMF.

Correspondence from the files of Swift & Co. indicates that the packers were at this time endeavoring to secure a favorable order from the Railroad Administration on the operation and distribution of their cars, as shown in the following letter:

CHICAGO, *January 11, 1918.*

Mr. EDWARD F. SWIFT:

I reported to you the result of our meeting with Mr. Cotton, in reference to the distribution of refrigerator cars, and showed you a copy of an order that Mr. Cotton and our committee had drawn up, which we hoped Mr. Cotton would be able to get Mr. McAdoo to sign.

Mr. Durand telephoned me last night that the prospects were very favorable for the car matter going through just about the way we outlined it.

If you don't remember the order, the important part of it is that all refrigerator cars should be placed under the control of a distributor, who should be a packer's railroad man, and the first unit of distribution would be that each packer should have his own cars, and the distributor would fill out the needs of the packers over and above his own cars, with railroad cars.

One exception to this rule is that if any packer has an export order of provisions or beef, and hasn't sufficient cars of his own, the cars of any other packer can be taken by the distributor and given to the man that is short of cars for his export orders, in order to fill it.

A. R. FAY.

ARF*VMF.
cc–C. H. Swift—cc–G. F. Swift, jr.

The order referred to was never signed by Mr. McAdoo.

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[1] Acting president of the Chicago, Burlington & Quincy Railroad.
[2] Mr. Holden was formerly president of the Chicago, Burlington & Quincy Railroad. At the date this letter was written he was a member of the Railroad War Board.

PART III

NONPACKER CAR LINES

CHAPTER 1.

RAILROAD-OWNED PRIVATE CAR COMPANIES.

In this part of the report the car companies owned by the railroads and the independent private-car companies will be considered. This latter class of companies is entirely independent of both railroads and shippers. This chapter deals with those private-car companies whose stock is owned by the railroads.

A large number of ventilator refrigerator cars are owned and operated directly by the railroad companies. Only a few of the roads have found it advisable to organize separate companies for the operation of refrigerator cars. The cars owned by a separately incorporated car company, even though that company's stock is entirely owned by carriers, are free from the rules of interchange which govern the operation of railroad-owned equipment. It is believed that this has been one of the principal reasons for the organization of private-car companies by the carriers. Until very recently the mileage revenue from privately owned equipment greatly exceeded the per diem allowance. In 1902, for instance, the per diem rate was 20 cents. A railroad-owned refrigerator car, therefore, earned but 20 cents per day when on the lines of a foreign road. By organizing a separately incorporated car company the railroad was able to secure, in lieu of the 20 cents per diem, the three-fourth-cent per mile applied to privately owned refrigerator cars, and the mileage revenue at this rate was considerably in excess of 20 cents per day. The railroad companies therefore secured a higher revenue from the operation of their refrigerator cars by organizing separately incorporated car companies. The per diem rate has been increased at various times since 1902 and is now 60 cents per day.[1] It is doubtful whether the cars operated by railroad owned private car companies are at present earning more than this amount under the mileage system. Another advantage from the organization of separately incorporated car companies by the carriers, which is more important now that the per diem rates have been increased, is the freedom from the rules of interchange relating to the return loading and the routing of railroad equipment. The rules as to the routing of cars often result in delay to a shipper. The rule providing for the loading on the return trip at times results in damage to the car, as a load of perishables is seldom available, and, consequently, heavy freight is often loaded into the car. By organizing separately incorporated companies the railroads secure exemption from these rules.

There are at present five private car companies owned by the carriers. These are the American Refrigerator Transit Co., Chicago, New York & Boston Refrigerator Co.; Frisco Refrigerator Line;

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[1] See p. 45.

Pacific Fruit Express Co.; and the Santa Fe Refrigerator Despatch Co. Table 76 shows the number of cars operated by each of these companies and the total operated by all the companies for the years 1914–1917, inclusive.

TABLE 76.—*Number of refrigerator cars operated by railroad-owned private car companies, 1914-1917.*

Company.	1914	1915	1916	1917
American Refrigerator Transit Co	5,577	5,493	5,669	5,667
Chicago, New York & Boston Refrigerator Co	817	803	788	776
Frisco Refrigerator Line	2,500	2,500	2,500	2,500
Pacific Fruit Express Co	12,977	12,925	12,884	13,883
Santa Fe Refrigerator Despatch Co	8,950	9,370	9,303	9,311
Total	30,821	31,091	31,144	32,137

The number of cars has increased slightly from a total of 30,821 in 1914 to 32,137 in 1917. The Santa Fe Refrigerator Despatch Co. added 420 cars to its equipment in 1915 and the Pacific Fruit Express Co. built approximately 1,000 cars in 1917. There was little change in the number of cars operated by the other companies. In addition to the 32,137 refrigerator cars operated by the carriers which have organized separately incorporated car companies, it is estimated that the railroads own 54,273 refrigerator cars which they operate themselves. This makes a total of 86,410 refrigerator cars under railroad control.

The combined revenues of the five railroad-owned companies for the years 1915 and 1917 are shown in Tables 77 and 78.

TABLE 77.—*Railroad-owned companies—statement of revenues, 1915.*

Company.	Mileage and per diem earnings.	Car rentals.	Refrigeration.	Commissions	Miscellaneous.	Total revenue.
American Refrigerator Transit Co.[1]	$841,272.91	$11,477.59	$378,545.61	$400,572.46	$7,798.34	$1,639,666.91
Chicago, New York & Boston Refrigerator Co	134,722.62	539.00		152,897.74	4,203.69	292,363.05
Frisco Refrigerator Line	319,231.29		331,483.60		7,545.94	658,260.83
Pacific Fruit Express Co.[1]	3,047,873.40		4,153,982.26		9,229.28	7,211,084.94
Santa Fe Refrigerator Despatch Co	1,533,208.88		1,512,111.94		58,979.16	3,104,299.98
Total	5,876,309.10	12,016.59	6,376,123.41	553,470.20	87,756.41	12,905,675.71

[1] Year ended June 30, 1915.

TABLE 78.—*Railroad-owned companies—statement of revenues, 1917.*

Company.	Mileage and per diem earnings.	Car rentals.	Refrigeration.	Commissions.	Miscellaneous earnings.	Total revenue
American Refrigerator Transit Co	$914,926.53	$14,477.85	$383,743.06	$278,314.85	$11,376.18	$1,602,838.47
Chicago, New York & Boston Refrigerator Co	126,472.10	3,916.66		164,930.69	9,901.80	305,221.25
Frisco Refrigerator Line	281,992.74		164,392.24		14,558.92	460,943.90
Pacific Fruit Express Co	3,304,808.31		5,580,985.58		8,137.29	8,893,931.18
Santa Fe Refrigerator Despatch Co	1,834,583.72		1,518,559.56		112,582.99	3,465,726.27
Total	6,462,783.40	18,394.51	7,647,680.44	443,245.54	156,557.18	14,728,661.07

An increase in total revenue resulted in 1917 over 1915 of over 14 per cent; refrigeration receipts increased about 20 per cent; and mileage about 10 per cent. Receipts from commissions, on the other hand, declined about 20 per cent. In 1917 approximately one-half the revenues of all the companies combined was from refrigeration and most of the remainder consisted of mileage and per diem earnings. The item of commissions is comparatively insignificant, amounting to only about 3 per cent of the total revenue of all the companies. It is a large item for the Chicago, New York & Boston Refrigerator Co., however, and comprises more than 50 per cent of that company's total revenue. For the American Refrigerator Transit Co. it amounts to approximately 17 per cent. The income from car rentals is almost negligible. It should be noted that the total revenue of the Pacific Fruit Express Co. was nearly $9,000,000, over 60 per cent of the total for all companies; and that of the Santa Fe Refrigerator Despatch Co. was nearly $3,500,000, or more than 20 per cent of the total.

AMERICAN REFRIGERATOR TRANSIT CO.

This company is the oldest of these railroad-owned private car companies. Its stock is held by the Missouri Pacific Railroad (including the St. Louis, Iron Mountain & Southern Railway) and the Wabash Railway in the proportion of 75 per cent and 25 per cent, respectively. It was organized in 1881 with its principal office in St. Louis and does its financing independently of the parent companies. At the time of reorganization (1898) the owning railroad companies paid in $500,000 cash for an equivalent amount of capital stock. A condensed balance sheet as of December 31, 1917, is given in Table 79.

TABLE 79.—*Balance sheet, American Refrigerator Transit Co., Dec. 31, 1917.*

Assets.		Liabilities.	
Car equipment	$4,180,528.66	Capital stock	$500,000.00
Buildings and other property	85,219.32	Bonds	1,801,000.00
Working assets	537,974.54	Bills payable	150,000.00
Deferred debit items	17,031.68	Working liabilities	257,475.87
		Deferred credit items	62,375.80
		Surplus	2,049,902.53
Total assets	4,820,754.20	Total liabilities	4,820,754.20

This company made profits aggregating nearly $2,200,000 in the years 1911 to 1917, inclusive. Interest aggregating a little over $600,000 was included in the items of expense, however, and if this interest be excluded from expense as it should be when measuring the rate of profitableness on the investment the profits are found to aggregate a little over $2,800,000 for the period. The average profit for the period was slightly less than $400,000 per annum. This represents an average return of about 7 per cent per annum on the investment.

The company's total revenues in 1917 amounted to $1,602,838.47. Of this amount approximately 56 per cent was from mileage and per diem earnings, 25 per cent from refrigeration, and 17 per cent from commissions. The total expenses were $1,498,749.65, of which maintenance of equipment amounted to about 63 per cent, transportation

expense 17 per cent, traffic expenses 8 per cent, and interest 7 per cent.

The company began operation with 769 cars pooled by the parent companies in the following number: Missouri Pacific Railroad, 369; St. Louis, Iron Mountain & Southern Railway, 300; and the Wabash Railway, 100. Numerous additions to its equipment have been made by the company since the date of its organization. A large part of the surplus earnings has been used to purchase new equipment. It owned 5,667 cars December 31, 1917. A large number of these cars, approximately 4,000, are equipped with beef rails so that they can be used for the shipment of fresh beef. They do not have brine tanks, however, and are not suitable for the transportation of fresh meats throughout all seasons of the year.

These American Refrigerator Transit cars, as well as those of the other companies under consideration in this chapter, with the exception of those of the Chicago, New York & Boston Refrigerator Co., are used for the most part in the transportation of fruits and vegetables. The American Refrigerator Transit Co. was one of the pioneers in the furnishing of cars in that traffic. When the company began operations in 1881 the shipment of fruits and vegetables under refrigeration was considered impracticable. In order to develop the business for its refrigerator cars the American Refrigerator Transit Co. first had to demonstrate the usefulness of the car itself and the practicability of shipping perishables under refrigeration. The car company accomplished this by sending agents into the growing districts to solicit the business and to give the growers expert advice concerning the most scientific methods of production, transportation, and refrigeration. The company's agents therefore had an important part in the development of the fruit-growing sections.

The expenses of these freight solicitors or field agents were paid by the American Refrigerator Transit Co. out of its receipts from commissions which were paid to it by the various carriers which handled the business in the American Refrigerator Transit cars. This commission varied from 5 per cent to 12½ per cent of the freight revenue and was paid to the American Refrigerator Transit Co. not only by its owning lines but also by a number of other railroads with which it had contracts for the furnishing of refrigerator cars and the payment of commissions. The percentage of the commission paid and the circumstances under which it was paid varied considerably for the different lines.

In an early period the expense of soliciting freight very probably was commensurate with the compensation received by the car companies in the form of commissions. In recent years, however, since the business of growing fruits and vegetables in specialized producing centers has become firmly established and the expense of soliciting freight has therefore become less, it is doubtful whether the payment of from 5 per cent to 12½ per cent of the freight revenue to the car company as a commission for the solicitation of freight has been justified. It has been alleged that these commissions have been used as a device to conceal rebates from the carrier to the shipper. Apparently realizing that the business of freight solicitation by private-car companies was no longer of any great value to the carriers, the Railroad Administration recently ordered that all such payments should be discontinued.

CHICAGO, NEW YORK & BOSTON REFRIGERATOR CO.

This company was incorporated May 3, 1893. Its principal office is in Chicago. At the time of its organization it was not affiliated with a carrier. On April 27, 1909, the Whipple Car Co. was organized for the purpose of acquiring the stock of the Chicago, New York & Boston Refrigerator Co. and of operating the company's car-manufacturing plant and refrigerator car line. In 1913 the capital stock of both corporations was sold to the Grand Trunk Railway Co. of Canada. All the material and supplies of both companies, as well as the rolling stock and all the plant equipment was purchased by the railroad company.

A large part of the net earnings of the past few years has been used to retire the company's bonded indebtedness. The net earnings during the years 1915, 1916, and 1917 aggregated approximately $250,000. In 1917 the net earnings were $70,918.45. This amounted to approximately 6 per cent on the outstanding capital stock. Dividends of 1¾ per cent were paid in 1916 and 6 per cent in 1917.

The company's total revenue in 1917 amounted to $305,221.25. The two largest items are commissions, amounting to $164,930.69, and car mileage, amounting to $126,472.10. The total expenses were $234,302.80, of which approximately 43 per cent was for maintenance of equipment, 13 per cent for depreciation, and 22 per cent for salaries.

In 1917, 776 refrigerator cars were owned and operated. The cars are equipped with brine tanks but do not have beef rails. They are used principally in the transportation and refrigeration of dairy products for various carriers with which the company has contracts. Some of these contracts provide that the carrier shall pay to the car company a commission amounting to 7½ per cent to 12½ per cent of the freight revenue. The rate of the commission varies according to the class of goods transported. The car company had contracts with the Grand Trunk Railway Co., the Lehigh Valley Railroad Co., the Delaware, Lackawanna & Western Railroad Co., and the Delaware & Hudson Co. providing for the payment of commissions. The payment of these commissions was in force until May 31, 1918, when, as previously stated, the Railroad Administration ordered that the payment of all commissions for soliciting freight should cease.

FRISCO REFRIGERATOR LINE.

This company was incorporated in 1911, with headquarters in St. Louis. It is owned by the St. Louis-San Francisco Railway Co. Table 80 shows a condensed balance sheet for this company as of December 31, 1917.

TABLE 80.—*Balance sheet, Frisco Refrigerator Line, Dec. 31, 1917.*

Assets.		Liabilities.	
Car equipment	$931,110.11	Capital stock	$5,000.00
Cash	4,040.89	Equipment and installments payable	805,683.75
Accounts receivable	30,661.58	St. Louis-San Francisco Ry. advances	276,440.78
Prepaid insurance	203.57	Other liabilities	64,714.96
Deficit	185,823.34		
Total assets	1,151,839.49	Total liabilities	1,151,839.49

The company's income and expense statements show a deficit each year for the period 1911 to 1917. The total deficit for the seven years' period is approximately $409,000. It should be noted, however, that the company pays the owners of its car equipment annually 12 per cent of the original cost of the cars, half of which is for depreciation and half for rental. The total operating revenue for the seven years' period amounted to approximately $3,120,000, of which more than $1,740,000 was from car mileage and more than $1,330,000 was from refrigeration. The total expenses aggregated approximately $3,530,000 including charges for hire of equipment and depreciation made against the car line by the railroads owning the cars. These charges amounted to approximately $985,000 and $1,030,000, respectively.

Prior to April 1, 1918, the company was operating 2,500 cars, 1,000 of which were leased from the Chicago & Eastern Illinois Railroad Co., 1,000 from the New Orleans, Texas & Mexico Railroad Co. and 500 from the St. Louis–San Francisco Railway Co. Since that date it has operated only 1,500 cars, those belonging to the Chicago & Eastern Illinois Railroad Co. having been returned to the owners to be operated by them.

All cars operated by this company are ventilator refrigerators, equipped with ice bunkers. They are especially designed for the transportation and refrigeration of fruits and vegetables and are used chiefly in that traffic. The company handles a considerable part of the fruits and vegetables from the Southwest. It has contracts with a number of carriers providing that it shall furnish refrigerator cars and refrigeration service. It has not been paid any commissions for soliciting freight.

PACIFIC FRUIT EXPRESS CO.

This company was incorporated in 1906 with its principal office in San Francisco. Its capital stock of $10,800,000, issued at par for cash, is divided equally between the Southern Pacific Co. and the Union Pacific R. R. Co. The balance sheet of December 31, 1917, shows a net investment of approximately $14,700,000 in car property. The company has no bonded debt but maintains an open account with the parent companies. This account varies considerably in accordance with the needs of the car line company for working capital. On December 31, 1917, it amounted to more than $3,100,000, which was divided equally between the two roads. At the close of the year 1911 the balance due the parent lines was more than $4,400,000; in 1913 it was less than $400,000. Interest is paid on this account. A profit has been made by this company in both its car operating and refrigeration departments in each year of the period 1911 to 1917. A dividend of 5 per cent was paid in 1911 and 10 per cent has been paid each year since that date. These dividends totaled $7,560,000 for the 7½ years' period. In addition to the dividends paid there was a surplus of more than $2,380,000 on December 31, 1917.

The Pacific Fruit Express is engaged chiefly in furnishing refrigerator cars and refrigeration service for transporting fruits and vegetables from the far West and the Southwest. It handles the business originating on the lines of its owners and a number of other western carriers. It is the largest of the railroad-owned private car companies

and in fact the largest of any private car company with which this report deals. It handles a larger volume of fruits and vegetables than any other company. It carries a considerable proportion of the products of California and other far western States to the eastern markets. The company owned 13,883 cars on December 31, 1917. On the same date in 1916 it had 12,884 cars. The company added approximately 1,000 new cars to its equipment during the year 1917 at an average cost of more than $2,100 per car. Its cars are all standard ventilator refrigerators equipped with steel underframes. They are among the best refrigerator cars now in operation. In addition to its own cars the company often operates cars leased from other private car companies, such as the American Refrigerator Transit Co., Fruit Growers Express (Inc.), Marsh Refrigerator Service Co., and the Union Refrigerator Transit Co. The company does not pay any rental for this foreign equipmment, but it guarantees to the owners that the mileage revenues on their cars shall be a certain specified amount. In case the mileage revenues do not reach that figure the Pacific Fruit Express makes up the deficit.

At times the Pacific Fruit Express Co. leases cars to shippers for their exclusive use, but such transactions are unusual. When cars are furnished to shippers under lease for a specified time a rental charge is assessed against the shipper. He is credited with mileage earnings on these cars while they are in his service. The Pacific Fruit Express expects to retire from the business of leasing cars to shippers for their exclusive use in order that it may have all its equipment available for its own use.

SANTA FE REFRIGERATOR DESPATCH CO.

This company was incorporated in 1902 with headquarters in Chicago. In effect it is simply an operating department of the Atchison, Topeka & Santa Fe Railway Co. The company handles no cash; all receipts and expenditures are handled by the railway company through a clearing account. The car company is debited with all expenses incident to the operation of refrigerator cars and the performance of refrigeration service, including rental of equipment, depreciation, car repairs, icing and miscellaneous expenses.

This company's total revenues for the period of 1911–1917 amounted to approximately $18,970,000. Expenses were slightly more than $19,210,000. The company therefore shows a net loss of approximately $240,000 for the period. A gain was made in the years 1911, 1912, 1915, and 1917 but the losses sustained in the years 1913, 1914, and 1916 more than offset the gains in the other four years. It should be remembered, however, that this company, like the Frisco Refrigerator Line, makes a charge to both depreciation and rental.

The car company owns no cars but leases its equipment from the railway company. In 1917 it operated 9,311 cars. These cars are all ventilator refrigerators especially designed for the transportation of fruits and vegetables. The company furnishes refrigerator cars and refrigeration service for the transportation of perishables originating on the Santa Fe system. It also furnishes cars to other carriers on a per trip basis, but it has no contracts with other carriers for the furnishing of equipment. Like the Pacific Fruit Express, it is engaged principally in the traffic originating in the far West and the

Southwest. At the time the company was organized in 1902, there were a number of individual private car companies competing for the California fruit trade. Since its organization the amount of that trade handled by the independent private car companies has diminished and the proportion handled by the carriers and the car companies affiliated with the carriers has steadily increased, so that all the fruits and vegetables of the West and Southwest are now transported in cars owned by the railroads and their affiliated companies.

From the viewpoint of size and the amount of business handled, the private car companies affiliated with the carriers are of considerable importance. These five companies own more cars than all the packers in the country. They own three-fifths as many refrigerator cars as all the other railroads of the country combined. They have been the leaders in the development of the important growing districts in the West and the Southwest and they are handling the larger part of the fruits and vegetables from those sections of the country at the present time.

CHAPTER 2.

INDEPENDENT PRIVATE CAR COMPANIES.

In addition to the private car companies affiliated with shippers and carriers, there is still another class which is entirely independent of shippers, associations of shippers, or railroad interests. These companies are organized for the single purpose of owning and operating cars at a profit to their stockholders.

REFRIGERATOR CAR COMPANIES.

There are at present nine independent car companies owning and operating refrigerator cars. They are The Anchor Car Co., Atlantic Seaboard Despatch, Federal Refrigerator Despatch Co., Mather Railway Equipment Co., Mid-West Despatch Car Co., Missouri River Despatch, and Western Heater Despatch Co., all of Chicago, and Marsh Refrigerator Service Co. and Union Refrigerator Transit Co., of Milwaukee.

These companies lease a part of their cars to shippers and railroads and the remainder are operated by the companies themselves on a mileage basis. The oldest of these companies was organized in 1903. Others have been organized at various times since that date, the most recent being the Anchor Car Co., in 1917. Some of these companies have been successful continuously since their organization. Others have had difficulty in operating at a profit, especially at times of a car surplus. Some of them are having considerable difficulty in securing an adequate return on investment at the present time because of the large increase in costs of maintenance and other operating expenses in the past few years without a corresponding advance in revenues.

Car equipment.—Table 81 shows the number of beef cars and other refrigerator cars owned by independent private car companies in 1914 and 1917.

TABLE 81.—*Refrigerator cars owned by independent private car companies, 1914 and 1917.*

Company.	1914			1917		
	Beef cars.	Other refrigerator cars.	Total.	Beef cars.	Other refrigerator cars.	Total.
Anchor Car Co.	4		4	4		4
Atlantic Seaboard Despatch	49	349	398	46	264	310
Federal Refrigerator Despatch Co.				5	20	25
Marsh Refrigerator Service Co.		945	945		901	901
Mather Railway Equipment Co.	151	700	851	101	742	843
Mid-West Despatch Car Co.					226	226
Missouri River Despatch	130	429	559	119	464	583
Union Refrigerator Transit Co.		2,615	2,615		3,007	3,007
Western Heater Despatch Co.		382	382		379	379
Total	334	5,420	5,754	275	6,003	6,278

These companies own only 275 beef refrigerator cars. These are but a small part, 1.6 per cent, of the 16,875 beef cars in the United States. Shippers own all the remainder of the beef-car equipment;

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the railroads own none of these cars. The independent private car companies own a somewhat larger proportion of other refrigerator cars than of beef cars. They own 6,003 "other refrigerators," which is slightly less than 6 per cent of the total in the country. These companies increased their equipment during the three years period from a total of 5,754 cars in 1914 to 6,278 in 1917. Two new companies, the Federal Refrigerator Despatch Co. and the Mid-West Despatch Car Co., were formed during the period and two of the old companies, the Missouri River Despatch and the Union Refrigerator Transit Co., increased their equipment.

Financial results of car operation.—Table 82 shows combined balance sheet for the nine refrigerator car companies as of December 31, 1917.

TABLE 82.—*Combined balance sheet, nine refrigerator car companies, Dec. 31, 1917.*

Assets.		Liabilities.	
Car equipment	$4,284,506.22	Capital stock	$5,830,000.00
Real estate, buildings, machinery, and tools	270,170.04	Bonds	1,232,366.44
Other assets	5,777,557.37	Other liabilities	1,552,023.06
		Surplus	1,717,844.13
Total assets	10,332,233.63	Total liabilities	10,332,233.63

The table shows that the book value of the 6,000 cars owned by these companies is something over $4,000,000. The real estate, buildings, machinery, and tools—in other words, the car shops—are valued at less than $300,000. The "other assets," amounting to $5,777,000, are composed for the most part of such items as leases, franchises, patents, and good will. It would be impossible to determine the real value of these items. A representative of one of the companies said that so far as his company was concerned the leases, franchises, and patents were at one time considered very valuable, but he questioned whether they possessed any real worth at the present time. He said that practically nothing could be realized upon them. These items are carried in this company's balance sheet at more than $2,000,000. It will be noted from the table that these companies have, to some extent, capitalized these intangible assets.

Tables 83 and 84 show the combined statement of receipts and expenses for the refrigerator car companies for the years 1914 and 1917:

TABLE 83.—*Combined statement of receipts and expenses, nine refrigerator car companies, 1914.*

Receipts.		Expenses.	
Mileage and per diem earnings	$899,266.59	Repairs, maintenance, material, and labor	$562,604.12
Rentals	262,180.91	Depreciation	233,165.40
Other income	57,305.39	Operating and general expense	130,471.69
		Taxes and insurance	17,116.01
		Interest	80,841.51
		Other expense	2,337.39
		Total expense	1,026,536.12
		Profit	192,216.77
Total receipts	1,218,752.89		1,218,752.89

TABLE 84.—*Combined statement of receipts and expenses, nine refrigerator car companies, 1917.*

Receipts.		Expenses.	
Mileage and per diem earnings	$962,988.14	Repairs, maintenance, material, and labor	$633,450.04
Rentals	353,960.38	Depreciation	244,055.06
Other income	42,144.93	Operating and general expense	162,684.17
		Taxes and insurance	29,946.60
		Interest	74,694.09
		Other expense	22,724.06
		Total expense	1,167,554.02
		Profit	191,539.43
Total receipts	1,359,093.45		1,359,093.45

The profit in the two years was almost exactly the same. There was an increase of approximately $150,000 in revenues in 1917 over 1914 and a corresponding increase in expenses. Both the earnings from mileage and rentals show a substantial increase in the latter year. The increased cost of repairs, materials, and labor, together with an increase in general operating expenses, entirely offset the increased revenues in 1917, so that the profits remain almost exactly the same.

It should be noted that the net profit of these companies is very small in comparison with the capital stock, or slightly more than 3 per cent. As will be explained later, some of the companies have actually made greater profits than those shown in Table 84, which was prepared from their own statements. These additional profits which should be added are relatively unimportant, however, and are not sufficient to modify the conclusion that the return from the operation of private cars has not been large enough in recent years to attract new capital to the field.

HISTORY OF EACH COMPANY.

Union Refrigerator Transit Co.—This company, the largest of the independent private-car companies owning refrigerator cars, was organized in 1903. Its principal office is in Milwaukee. The company owns 3,007 of the 6,278 refrigerator cars owned by this class of companies. Most of this company's cars are used in the shipment of fruits and vegetables. A large number are used in the banana traffic. In addition to its own cars the company also operates 495 cars owned by the Chicago, Milwaukee & St. Paul Railway Co.

Prior to 1917 the Union Refrigerator Transit Co. had always operated on a mileage basis. Its cars were not leased to any particular shipper, but were furnished to any shipper upon request. The company made no rental charge for the use of its cars. Its only source of revenue was the mileage collected from the various carriers over whose lines its cars were operated. The company preferred not to charge rentals even at a time of car shortage, when they could have been collected from shippers for the asking. The company apparently reasoned that good treatment of all users of its cars at all times would create a good feeling toward the company and assure a more uniform demand for its cars. It could operate them profitably on a mileage basis as long as it could keep them in constant service, and its aim seems to have been to assure itself a fair but steady

profit rather than to work for excessive profits during times of abnormal demands for car equipment.

The increased costs of maintenance and operation have prevented the continuance of this policy. By 1917 the company found that it could no longer operate its cars profitably on a mileage basis but must have, in addition, a rental from the shipper. Practically all the users of Union Refrigerator Transit cars are, therefore, now paying rentals to the company for the use of its equipment. The banana shippers are an exception to this rule. The cars in this service have a long, fast haul, and they still earn a sufficient mileage revenue to yield a good return on the investment. The Union Refrigerator Transit Co. has always had efficient management by experienced men. It has therefore had an uninterrupted successful development.

Marsh Refrigerator Service Co.—The Milwaukee Refrigerator Transit & Car Co. was organized in 1903 and was reorganized as the Marsh Refrigerator Service Co. in 1917. Its principal business originally was to furnish equipment to the Pabst Brewing Co. for transporting that company's beer and other products. The brewing company has been using the larger part of its equipment until very recently. A singular situation arose out of the relationship between the Pabst Brewing Co. and the Milwaukee Refrigerator Transit & Car Co. Previous to 1906 commissions of 10 per cent to 12½ per cent of the freight revenue on goods carried in Milwaukee Refrigerator Transit cars were paid to the car company by certain of the carriers which handled the freight. The validity of these payments was attacked on the ground that, since Fred Pabst and others connected with the Pabst Brewing Co. owned the majority of the stock of the car company, the payments of commissions to the car company were, in effect, indirect payments to the Pabst Brewing Co., and therefore constituted a rebate by a carrier to a shipper in violation of the Elkins Act. The court did not sustain this contention, but it did order that payment of the commissions be stopped, on the ground that since the brewing company had given the car company complete dominion over the freight, the car company had become at least a "party interested in the traffic." The court held that the application of the Elkins Act was not limited to the relations existing between carrier and shipper, but extended to all "parties interested in the traffic."[1]

The Marsh Refrigerator Service Co. owns 901 refrigerator cars, 226 of which are equipped with end ice boxes and 675 are without either ice boxes or tanks. Beer is shipped in this latter type of car, and the ice is placed in direct contact with the package. The larger part of this company's cars has been leased to the Pabst Brewing Co. and the Wm. J. Lemp Brewing Co. A few of the company's cars are leased to railroads for the entire year, and others are leased temporarily to the carriers.

The Marsh Refrigerator Service Co. has extensive shops in Milwaukee for the repair and rebuilding of cars. It makes all the repairs on its own cars except the light running repairs made by the carriers over whose lines they are operated. The company also does considerable repair work and rebuilds cars for other private car companies and railroads. It is now rebuilding a number of its own cars each year. This company has also been very well managed and has had

[1] See 142 Fed. Rep., 247; 145 Fed. Rep. 1007; I. C. C. Report, 1906, pp. 47-48.

good results from operation. In its early history, of course, it thrived on commissions. In later years, since there have been no receipts from that source, it has not been able to show such good financial returns.

Mather Railway Equipment Co.—This company was organized in 1909 with headquarters at Chicago. Alonzo C. Mather, pioneer in the development of the stock car, is practically the sole owner of this company. The company's organization is linked with that of the Mather Horse & Stock Car Co. The company owns 843 cars, of which 101 are beef refrigerator cars and 742 are provision and dairy cars. Its equipment is leased to railroads, packing companies, and dealers in dairy and creamery products.

Missouri River Despatch.—This company owns 583 refrigerator cars, including 119 beef cars equipped with brine tanks and beef rails, and 464 dairy cars, which have brine tanks but no rails. All the cars are now leased to the Grand Trunk Railway Co., owner of the Chicago, New York & Boston Refrigerator Co.

Atlantic Seaboard Despatch.—This company, incorporated in 1908, has its principal office at Chicago. It is in a way affiliated with the Mid-West Despatch Car Co. The two companies are practically under the same management. The Atlantic Seaboard Despatch owns 310 cars, including 46 beef refrigerator cars, equipped with brine tanks and beef rails, 185 refrigerator cars equipped with ice tanks, and 79 ventilator refrigerators with no tanks. The New York Central & St. Louis Railway and the Delaware, Lackawanna & Western Railroad lease 200 of this company's cars and operate them as the Nickel Plate-Lackawanna Dairy Line. The company operates the remainder of its cars on a mileage basis. Practically all the equipment is used in the transportation of dairy products.

Mid-West Despatch Car Co.—This company was incorporated in 1915. The company owns 226 refrigerator cars, 205 of which are equipped with ice tanks. This equipment is used for the most part in the transportation of provision and dairy products. A part of the cars are leased to the New York Central & St. Louis Railway and the Delaware, Lackawanna & Western Railroad, and the remainder are operated by the company on a mileage basis.

Western Heater Despatch Co.—This company, organized in 1914, with its principal office in Chicago, owns 379 ventilator refrigerator cars which have no ice tanks and are suitable only for the carrying of products which are iced directly with the package, such as beer, poultry, milk, and fish. The company operated most of its cars on a mileage basis during the year 1917. It has been difficult for the company to lease its cars to shippers on the basis of guaranteed mileage earnings, because the slow movement of refrigerator cars in 1917 resulted in too large a loss to shippers from the operation of cars under such an arrangement. In addition to its refrigerator equipment, this company owns 147 lined box cars which are leased to the Chicago & North Western Railway Co.

Federal Refrigerator Despatch Co.—This company, organized in 1915, with headquarters at Chicago, has 5 beef cars and 20 other refrigerator cars, which it leases to T. M. Sinclair & Co. (Ltd.). Until recently the Federal Refrigerator Despatch also leased 13 cars from the Missouri, Kansas & Texas Railway Co. It paid the railroad a monthly rental for the use of the cars and operated them itself on a

mileage basis. These cars were equipped for passenger service and they were used on through shipments from the Northwest. The company received 1½ cents per car mile from the carriers on these cars. They had a very fast movement and they earned sufficient revenue to allow the car company considerable profit after it had paid the rental to the railway company.

Anchor Car Co.—This company, incorporated in 1917 as successor to the Atlas Car Co., is primarily a tank-car company. This report does not deal with tank cars, since they are not used extensively in the transportation of food products. The company owns 4 beef-refrigerator cars which are leased to the Charles Wolff Packing Co., of Topeka, Kans.

STOCK-CAR COMPANIES.

Companies organized for the purpose of owning and operating stock cars are older than the refrigerator-car companies, dating back to 1881 when the Mather Humane Stock Transportation Co. was formed. In addition to this company, which is still operated as the Mather Horse & Stock Car Co., there are four other companies now operating stock cars: The Streets Co., the Doud Stock Car Co., Le Ray Despatch Line (Inc.), and the Arms Palace Horse Car Co.

Table 85 shows the number of stock cars owned by these companies in 1914 and 1917.

TABLE 85.—*Stock cars owned by independent private car companies, 1914 and 1917.*

Company.	1914			1917		
	Double deck.	Single deck.	Total.	Double deck.	Single deck.	Total.
Arms Palace Horse Car Co		458	458		448	448
Doud Stock Car Co		1,413	1,413		733	733
Le Ray Despatch Line (Inc.)					113	113
Mather Horse & Stock Car Co	488	8,483	8,971	706	7,511	8,217
The Streets Co	293	5,539	5,832	340	4,151	4,491
Total	781	15,893	16,674	1,046	12,956	14,002

These companies own 14,002 stock cars, of which 12,956 are single-deck cars and 1,046 are double decks. A large number of these cars are leased to railroads and shippers and the remainder are operated by the owners on a mileage basis. These companies have decreased their equipment slightly during the past three years.

FINANCIAL RESULTS OF CAR OPERATION.

Table 86 shows combined balance sheet of the stock-car companies as of December 31, 1917.

TABLE 86.—*Combined balance sheet, stock-car companies, Dec. 31, 1917.*

Assets.		Liabilities.	
Car equipment	$7,937,522.56	Capital stock	$4,800,000.00
Real estate, buildings, machinery, and tools	511,092.06	Bonds	1,182,000.00
Other assets	3,037,775.23	Other liabilities	915,804.59
		Surplus	4,588,585.26
Total assets	11,486,389.85	Total liabilities	11,486,389.85

It may be noted that the car equipment is valued at approximately $8,000,000, the real estate, buildings, and machinery at $500,000, and the other assets at $3,000,000. Similarly to the refrigerator-car companies, these companies carry such intangible assets as patent rights, franchises, and good will on their books at large valuations. The larger part of the item "other assets" is composed of these intangible items.

Tables 87 and 88 show the combined receipts and expenses of these stock-car companies for the years 1914 and 1917.

TABLE 87.—*Combined statement of receipts and expenses, stock-car companies, 1914.*

Receipts.		Expenses.	
Mileage and per diem earnings	$268,420.62	Repairs, maintenance, materials, and labor	$1,230,134.66
Rentals	1,658,108.20	Depreciation	422,329.79
Other income	7,795.04	Operating and general expense	160,744.22
		Taxes and insurance	23,861.91
		Interest	155,340.36
		Total expense	1,992,410.94
		Loss	58,087.08
Total receipts	1,934,323.86		1,934,323.86

TABLE 88.—*Combined statement of receipts and expenses, stock-car companies, 1917.*

Receipts.		Expenses.	
Mileage and per diem earnings	$148,172.25	Repairs, maintenance, materials, and labor	$1,349,942.99
Rentals	2,133,389.85	Depreciation	426,038.37
Other income	11,235.51	Operating and general expense	190,598.73
		Taxes and insurance	18,563.48
		Interest	84,697.37
		Other expense	33,622.14
		Total expense	2,103,463.08
		Profit	189,334.53
Total receipts	2,292,797.61		2,292,797.61

A loss of $58,000 was sustained in 1914 and a profit of $189,000 was made in 1917. Although expenses increased in 1917, the increase in revenues was more than sufficient to offset the increase in expenses. A large increase in the item of rentals was responsible for the better showing in 1917.

The profit in proportion to the capital stock is about 4 per cent. This is not sufficient to warrant extensive investment in stock cars by private-car companies. No new companies of any importance have been organized in recent years, and some of the older companies have been disposing of their equipment, apparently with the idea of liquidating their business entirely.

HISTORY OF EACH COMPANY.

Mather Horse & Stock Car Co.—This company is the oldest and largest of the stock car companies and has its headquarters at Chicago. It had its origin in the humanitarian motives of Alonzo C. Mather, who is still practically the owner of the company. In an

article on "Private Cars," published in the Railway Age, October 16, 1903, Mr. Mather described an experience which led him into the stock-car business. The following is quoted from that article:

While on a journey east I was detained for 12 hours on account of a wreck, ana y the side of the car which I occupied was a stock train, having been many days on the road, in one car of which were five dead steers and several maimed and bleeding, caused by the frantic efforts of one large and powerful animal in working his way from one end of the car to the other in accordance with his natural instinct, in search of food and water.[1]

Moved by this experience, Mr. Mather designed and built a new type of stock car in which the animals could be fed and watered in transit and separated in stalls. He spent a great deal of time and money in developing the car. He made experiments and comparisons by shipping two carloads of cattle at the same time, one load in his own car and the other in an ordinary stock car. He weighed the stock before shipment and again at destination. The experiment showed that cattle could be shipped from Chicago to New York with less shrinkage in a Mather car than in other stock cars. After demonstrating the efficiency of his car, Mr. Mather approached the railroads and tried to induce them to build some of these cars. Their reply was that they were not interested in investing money in experiments, but that they would be very glad to haul his cars and pay him three-fourths of a cent per mile if he cared to build them. Mr. Mather decided to do this, and organized a company for the purpose of building, owning, and operating this improved type of car for transporting live stock.

The Mather Horse & Stock Car Co. now owns 8,217 stock cars, of which 7,511 are single deck cars and 706 are double decks. The company also owns 369 automobile, 357 box, 115 tank, 199 gondola, and 4 flat cars. Practically all these cars are now leased to railroads and are used for handling miscellaneous freight. Some of them are leased to shippers who have special use for them in their business. The Mather Co. is the only large stock car company which is not gradually dispossing of its equipment. It is the only company which has been able to operate stock cars successfully and profitably for a long period of time.

The Streets Co.—This company is also an old institution in the stock car business. Streets's cars were in operation as early as the eighties. The present company, however, has been incorporated only since 1915. Reorganization at that time was necessary because of the inability of the Streets Western Stable-Car Line, a Canadian corporation, to meet its obligations. The old company was laboring under excessive interest charges on a large issue of bonds. Since the reorganization, the Streets Co. has shown better financial results. All its surplus from profits in operation, as well as the receipts from the sale of a part of its equipment, which it is gradually selling to the carriers, has been used to liquidate the company's bonded debt. It will be noticed in the table that the company owns 4,491 cars, of which 4,151 are single deck and 340 are double deck cars. In 1914, the company owned 5,832 cars. During the three years' period, therefore, it disposed of 1,341 cars. A large part of this company's equipment is leased to railroads on a monthly rental basis. The

[1] Railway Age, v. 36, p. 505.

Streets Co. gets no mileage revenue from the operation of cars leased to the carriers.

Doud Stock Car Co.—This company is also located in Chicago and was incorporated in 1903. The company now owns 733 single deck cars. In 1914 it owned 1,413 cars. It has, therefore, disposed of approximately one-half of its equipment during the three years' period. The company leases very few of its cars; most of them are held available for any railroad or shipper which may call for them at any time. The car company collects no rental on cars which are operated in this manner. Its only source of revenue is the mileage paid by the carriers over whose lines the cars are operated.

Le Ray Despatch Line (Inc.).—This company, which is located at Carthage, N. Y., was incorporated August 25, 1917. It owns 113 stock cars which are used in transporting pulp wood from the producing areas in Canada to the mills in the northern part of New York. This company is owned by the shippers. It should not be classed as an independent private car company, nor should its cars be included in the equipment available for the carrying of live stock.

Arms Palace Horse Car Co.—This company is a Chicago concern which was organized in 1883. It owns 448 cars which are classified in the table as single deck stock cars, but which are really highly specialized equipment, built for carrying horses and thoroughbred live stock. These cars should really not be classified with other stock car equipment. Of the 448 cars owned by this company, 102 are equipped for passenger or express service. The remaining 346 cars are equipped for freight service. The cars of this company may be secured by any shipper or railroad upon request. A rental charge on a mileage or trip basis, depending upon the length of the haul, is assessed against the shipper. In addition to its revenue from rentals the company also receives a mileage allowance from the railroads over whose lines its cars travel.

OULTRY CARS.

There are two private car companies operating poultry cars: The Live Poultry Transit Co. and the Lemac Carriers' Co., both of Chicago.

Live Poultry Transit Co.—The Live Poultry Transit Co. was originally organized in 1887 as the Jenkins Poultry Car Corporation. A few years later this company was succeeded by the Live Poultry Transportation Co., which, in turn, was reorganized as the Live Poultry Transit Co. in 1913. Frank X. Mudd, president of the company, has given this business practically his entire time and attention for approximately 30 years.

At the time of the last reorganization in 1913, the Live Poultry Transportation Co. owned approximately 700 cars. The car equipment was not taken over by the Live Poultry Transit Co. although this company acquired all the other property, patents, and leases of the Transportation Co. Another company, the International Equipment Co., was formed for the purpose of acquiring the car equipment. Since 1913 the International Equipment Co. has been the owner of all the poultry cars operated by the Live Poultry Transit Co. The latter company owns no equipment. The owning company and the operating company are closely affiliated through stock

ownership and are also bound together by a lease which provides that the International Equipment Co. shall lease all its cars to the Live Poultry Transit Co. for a number of years.

The movement of these cars is directed by the operating company. They are sent to all parts of the country wherever one or more loads of live poultry are ready for shipment to market. They are consigned directly to consuming centers. The average haul of a car of poultry is 930 miles. A keeper who is especially trained in this business accompanies each car of poultry and takes care of the feeding and watering in transit.

The Live Poultry Transit Co. operated on the average 1,091 cars in 1917. These cars are a highly specialized type of equipment scarcely adaptable to any other traffic. The present cost of an all-steel poultry car is about $3,600. The depreciation of this equipment is rapid; the car is open and is therefore subject to the weather. Corrosion of the metals also results from the chemical action caused by the droppings of the fowls. Because of the large original investment and the rapid depreciation, the cost of maintaining and operating a first-class poultry car is high. The mileage allowance of 1 cent per mile from the carriers pays for only a small part of the expenses of operating these cars. In addition to this allowance, the company assesses a rental charge against the shippers who use its cars. This rental varies from $10 per trip for 100 miles or less to 3 cents per mile on the longest hauls. Even this revenue has been inadequate to meet the company's expenses in the past few years.

There was a considerable decline in the company's revenues in 1917, due to a slower movement of its cars and also to the fact that there was less demand for such equipment than usual. The company's cars practically ceased operating during the 12 weeks' period that the shipment of hens and pullets was prohibited by order of the Food Administration. In his testimony at the recent hearing before the Interstate Commerce Commission the president of this company stated that it could not continue to operate for any length of time unless it were granted a larger allowance from the carriers. He argued that the mileage allowance from the railroads should be 2 cents per mile instead of the three-fourths cent rate which was then in effect. In disposing of the case the Interstate Commerce Commission ordered that the rate should be increased to 1 cent.

Lemac Carriers' Co.—This company, also located at Chicago and organized in 1911, operates 129 live-poultry cars under practically the same system as the Live Poultry Transit Co. It receives the usual mileage allowance from the railroads and assesses a rental charge against the shippers who use its equipment. This company has also been unable to operate its cars profitably for the past few years.

Table 89 shows a comparison of per car earnings and the cost of repairs per car for all independent private-car companies, discussed in this chapter, for the years 1914 to 1917.

TABLE 89.—*All independent private car companies—Comparison per car surplus earnings over repairs for years 1914–1917, inclusive.*

Year.	Total number of cars.	Total cost of repairs.	Amount of repairs per car.	Total mileage, per diem, and rental earnings.	Amount of earnings per car.	Surplus earnings over repairs per car.
1914	24,821	$1,898,417.46	$76.48	$3,573,972.79	$143.99	$67.51
1915	24,849	1,835,179.33	73.85	3,608,774.16	145.23	71.38
1916	24,291	1,854,392.04	76.34	3,958,046.11	162.94	86.60
1917	22,861	2,113,161.12	92.44	4,148,310.87	181.46	89.02

It may be noted that, although the cost of repairs has steadily increased during this period, the per car earnings have increased more rapidly, so that the surplus earnings over repairs, amounting to $67.51 per car in 1914, has steadily increased to $89.02 per car in 1917. The better showing in 1917 is largely due to the increase in rentals received by these companies.

It should be noted in conclusion that several of these companies are very small to be engaged in such a business as the operation of car equipment. In concluding that the operation of cars has not been profitable enough to attract new capital into the field, it should be borne in mind that the statements as they have been presented in combined form reflect the condition of the smaller and less efficiently operated companies as well as the larger and more efficient companies. In general, the older, well-managed companies, except in cases where they have been burdened by excessive capitalization and excessive bonded indebtedness, have been successful. The causes of failure in this business seem to have been, without exception, either over-capitalization or an attempt to enter, on a small scale, a business which really should not be attempted except on a large scale.

Some of these companies have kept very poor records and are using accounting methods approaching the obsolete. In general, it may be said that those companies which are simple of organization and which are not laboring under excessive capitalization have been the successful companies in the business.

CHAPTER 3.

RELATION OF PRIVATE CAR COMPANIES TO SHIPPERS AND RAILROADS.

POSITION OF THE SHIPPER.

There are shippers of perishable food products, independent of the Big Five packers, who need special equipment cars in which to transport their products to market. Some of these shippers also require special equipment cars in which to transport material to their plants. Of these there are only six who have enough use for special equipment cars, or who have considered it advantageous for other reasons, to have separately incorporated companies for their cars. Most shippers who own cars, some of whom have a comparatively large number, operate them by means of a car or transportation department. A great many shippers who need special equipment own no cars at all, but depend upon leasing them from private car companies or requisitioning them from railroads.

The number of cars owned by all shippers, independent of the Big Five, is small and can take care of only a very small per cent of the business. Ownership of equipment requires a considerable investment and has not been found to pay direct returns to some of the small shippers. Small and particularly seasonal shippers find it unprofitable to own cars. The cars, besides being an expense, finally depreciate to scrap. The ownership of cars, however, gives a shipper the advantage of reliable transportation facilities, advertising value, and the saving of rentals.

Fruits, vegetables, live stock, fresh meat, and liquid foods require special equipment for their transportation to market. Refrigerator, stock, and tank cars are necessities in economic food distribution. Transportation facilities are of prime importance in the development of a business in perishable foods. The slaughterer can not safely kill for interstate or distant shipment until he has made arrangements for beef refrigerator cars. It would be folly to purchase berries in growing districts for distant markets before making sure that a supply of ventilator refrigerator cars will be ready to receive them. The country hog buyer must be assured of stock cars before he accumulates fat hogs in the yards, especially in hot weather.

In making his arrangements the shipper first turns to the railroads. Railroad companies are expected to furnish enough ordinary equipment to supply the demand of shippers. There have been continuous controversies over the subject of the distinction between special equipment and ordinary cars. No one doubts that railroads should furnish box and flat cars. Most roads have a fair supply of coal and single-deck stock cars. Some roads have types of refrigerators, ventilators, tanks, and double-deck stock cars. They have no beef cars and very few poultry cars.

POSITION OF THE PRIVATE CAR COMPANY.

After failing to obtain cars from carriers the shipper approaches the private car company having equipment with the proper requirements. Much perishable freight shipped in private equipment is seasonal, and the cars are transferred from service in one section to another for carrying perishables, sometimes of a different character, from newly ripening fields. Private cars are kept busy the entire year. Not only does private ownership of cars relieve the railroad of furnishing certain classes of equipment, but the freight to be carried can be handled with fewer cars privately owned than if each railroad should supply sufficient equipment to give proper attention to the freight it hauls. The cost of refrigerator cars and expenses of maintenance are high and they can not be used profitably or conveniently by railroads for shipping nonperishable freight.

The shipper leases the equipment for his exclusive use from a private car company. He is usually able to get what is most desirable for the transportation of his product, and if the private car companies do not have what he is in need of they will often build new cars or equip old cars, if the rental is inviting. Stock cars have been boarded up for use by grain shippers when railroads could not furnish sufficient boxes. Stock cars have also been suitably fitted up for tomato shipments. During the winter of 1917–18 shippers had considerable difficulty in getting sufficient beef, tank, and double-deck stock cars from private car companies. In 1917 independent private car companies owned only 275 beef cars and 1,046 double-deck stock cars. The recent scale of prices for materials used in building new equipment, together with the increased cost of repairs, has discouraged the building of enough cars to furnish a sufficient supply. The independent private car company has relieved both the shipper and carrier of some responsibility in owning cars and as an intermediary has given advantages to both.

Rentals.—Until recent years the larger part of the private car company's revenue has been from mileage. The magnitude of recent repair bills, however, has taught the owner that mileage revenue is now not sufficient, and the shipper must therefore pay for the privilege of transporting his perishables in special equipment cars. Even until 1917 some meat packers were supplied with beef cars without having to pay rentals. Some car companies having various classes of equipment never charged rentals until 1917.

Private car companies have not obtained enough revenue from mileage to keep pace with the rising cost of repairs. The private car company, if permitted to continue as a factor in transportation, should be allowed to make a suitable return on the investment. In recent years the private car companies, through their inability to get sufficient mileage earnings from the railroads, have put the burden upon the shippers by the exaction of rentals. The consumer, of course, will eventually pay for any profit made by the private car company. If the shipper pays a higher rental he charges more for his perishables. If the railroads were compelled to pay mileage that would be adequate without rentals, the freight rates would probably be increased, which in turn would probably reflect on the prices paid by the consumer.

Certain it is that the private car company, like any other business, will follow the line of least resistance. Since it is very difficult to obtain any increase from railroads in mileage rates the lessees have had to pay higher rentals. The gradual increase in rates from 1914 to 1917 appears to be justified as far as the private car company is concerned; in fact the increase has not been rapid enough to meet the needs of a few of the companies. Cars are leased sometimes for very long periods and rental rates can not be raised until the expiration of the leases. Although the private car owner has not always been able to increase his rental rate as soon as was deemed necessary, he has made more progress in this respect than in his efforts to secure increased mileage rates.

A private car line is not a common carrier (see pp. 69 and 70) and is nat required to publish a tariff. There is by no means a standard rental rate. Cars are usually rented under a lease, which is ordinarily very simple. Sometimes simply an exchange of correspondence between the shipper and private car line constitutes the agreement. Beef, tank, and stock cars are usually rented on a monthly basis for a period of a year or more. Shippers, other than meat packers, often have need of cars during short periods only and rentals are quite frequently based on a per day or per trip rate. Charges are made by the year, month, day, and trip, but in most instances by the month. There has always been a great variation in rentals paid for leased equipment.

In December, 1917, the monthly rate on beef cars was as high as \$32.50 as compared with \$15, the general rate in 1914. The ordinary rate in 1917 was \$25 to \$30 per month and the rate per day had become practically stabilized at \$1. Other refrigerators rented for \$15 to \$20 in 1914 and reached \$20 to \$30 in 1917. The general rates in the two years were \$15 and \$25, respectively. Rates per day rose from 50 cents to \$1. The rate on stock cars increased from \$9 and \$10 to \$12 and \$13.50 per month. Rentals for tank cars underwent the greatest change. The general rate recorded in 1914 was \$10 per month. In 1917 leases called for rentals as high as \$150 per month and \$5 per day.[1]

When a shipper leases equipment he usually gets the mileage earnings of the cars. Only in case of short time leases, such as for single trips, does the owner generally keep the mileage. In many instances at present the private-car owner collects the mileage and credits it to the shipper or lessee.

It is seldom that private-car companies make any charges against the shipper when cars are used for storage purposes. In some of its contracts the Fruit Growers Express Inc., specifies that its cars must be moved rapidly, as they are not expected to be used for storage purposes. Beginning in December, 1916, in addition to their regular demurrage charges, the railroads collected storage charges on the cars of the Live Poultry Transit Co. for the account of the company. It appears that poultry cars were often held and actually used for storage purposes for several days while the cars were being loaded. They were also used as assembling, feeding, and storage facilities until the poultry was killed and packed.

It is customary for the lessee to pay for running expenses. The private car company almost without exception pays for heavy

[1] A tabulation of rental rates for the period 1914 to 1917 is given in Exhibits 7 and 8.

repairs and usually for light repairs. Companies that have their own repair shops usually require that the lessee return cars to their shops for heavy repairs unless the condition of the car will not permit the journey. In the latter event the railroad company makes the repairs under the Master Car Builders' rules. Occasionally the private-car company ships parts to the lessee so that repairs can be made as economically as possible. Rental charges are suspended when cars are out of service for heavy repairs.

Advisability of publication of rental charges.—The Interstate Commerce Commission has power to require carriers to publish in their tariffs the charges levied upon shippers as lessees for the use of cars employed upon the carriers' lines. All shippers similarly situated should be able to lease cars upon the same terms and conditions. Publication of rental charges in tariffs of the railroads would serve not only as a remedy for any unfair practices existing but would also be a preventive for unjust discrimination and unfair charges. The railroads have not as a general rule published rental charges. Some roads publish charges for poultry cars and tanks, but as a rule the shipper leasing a car makes his arrangements with the private-car company and the carrier does not enter into the transaction. The charges have apparently not been sufficiently discriminatory to demand the publication of the charges.

Separate charge for special equipment.—Carriers have made request of the Interstate Commerce Commission for permission to make an extra charge for cars of special design in addition to the freight rate on the articles carried. Their contention is that the freight rate in many instances is predicated on transportation service furnished by an ordinary car such as a box car. When the carrier furnishes a ventilator or refrigerator car, it supplies a special facility which, it has been said, "does something to the freight" besides carry it. Since this special designed car is more expensive than the ordinary car upon which the freight rate is often predicated, and since the shipper is getting a better facility when using it, the carriers maintain that there should be a separate charge to the shipper.

The objections to the separate charge are based mainly upon the difficulty of defining what constitutes a "special car" and the application of its definition to various sections of the country and various seasons. There are representative points where a ventilator refrigerator car can no longer be called a special car, because its use is common and the shipment of products from these points anticipates the use of no other equipment. At these same points an order for a tank car would be very exceptional. There are other points where tank cars are the usual vehicles and refrigerators the exception. Again, in some months of the year a refrigerator car is in ordinary use at some points, but a change of season makes its use an exception. There are territories that in some years require ventilators while in others the ordinary box cars suffice. It has therefore been held in numerous decisions by the Interstate Commerce Commission that some rates now published by carriers include transportation in equipment for which the carriers claim they are entitled to a separate charge. It would be impossible to determine when the rate already included the charge and when an additional charge for the furnishing of special equipment was justified.

This question was discussed at the recent hearing of the Interstate Commerce Commission on the subject of private cars and in its report issued on July 31, 1918, the commission stated its conclusion as follows: "A charge in addition to freight rates should not be made for furnishing to shippers refrigerator, tank, or other special type of car, or for transporting their shipments therein, unless the freight rates are predicated on the transportation in another type of car less expensive and not so difficult to operate."

The lease.—Leases for the rental of cars are often very simple. Incidental matters are usually taken care of by conversation or correspondence, so that all the ordinary lease contains is an agreement for the owner to let and the shipper to take a certain number of cars briefly described, at a specified rental, and at a certain point of delivery. In many instances there is no lease, correspondence and sometimes conversation constituting the only agreement.[1]

Some of the more uncommon specifications in leases include arrangements for refrigeration, cleaning cars, and delivery of equipment to lessee and back to lessor. Some leases also specify the kind of repairs and maintenance for which the shipper must pay. It is also often stated that the shipper shall be excused from paying rental should a car be out of service for heavy repairs. Sometimes a lease requires that the shipper give each railroad as much loaded mileage as empty or pay the penalty of 4 to 10 cents per mile levied by railroads on excess empty mileage. Leases have specified that the lessee must give to the lessor half or all the mileage earnings in excess of the amount of the rental paid.

Included with the independent private car companies as lessors of equipment are the railroad-owned private car companies, owning thousands of ventilator refrigerators, some of which are rented to shippers. Occasionally the big packers lease some of their stock and tank cars to independent shippers. The incorporated car companies of shippers, outside the big packers, bear the relation of lessors to their owners as lessees, and they also sometimes find that they can spare some equipment which is then leased to other shippers.

Stenciling and advertising space.—When a car is leased the owner's name must remain on it. The name of the lessee is stenciled on, appearing usually in a statement that the car must be returned to him when empty. The expense of such stenciling is sometimes paid by the owner and sometimes by the lessee. The name of the lessee stenciled on a car gives him certain advertising value as a shipper. Many products have had valuable advertising by this means. Included among these are packing-house products and beer. In some instances the owner of the car has made a separate charge for the advertising space.

Cooperation between the private car line and shipper.—In the operation of leased cars there is an unusual degree of cooperation between owner and shipper. Their efforts are united against the railroad companies to get the maximum car miles, to keep down repairs, and to prevent misuse. When a car is shipped by the lessee he reports the departure, route, and destination of it to the lessor. It is of importance to the lessor to know the whereabouts of his equipment, even though he is not collecting the mileage. Railroads often divert, lose, or misuse leased equipment for an unusual length of time.

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[1] A representative lease appears as Exhibit 9.

The private car company as lessor is sometimes quite as active as the lessee in its efforts to have the car properly directed or returned. A car is often bumped about in continual switching. In such service the car suffers greatly from damage, for which the private car owner must pay. During this period, the lessee does not have the use of the car and must make other arrangements for equipment. He collects little mileage, if any at all, and is paying a rental for the equipment which he can not in turn collect from the railroad.

Misuse of equipment by railroads.—Misuse of private equipment by railroads shows a lack of cooperation between the railroads and both private car lines and shippers. One form of misuse is that of diversion. When a car has been unloaded at its destination, it is supposed to be returned to the shipper who is paying a rental for its exclusive use. Sometimes cars are diverted and are not returned to the lessees for a considerable period of time. It has been peculiarly characteristic of long-time diversions that the cars were seldom if ever loaded when beginning such a journey. When they are put under load it is usually in local service, for which there is a scarcity of cars because of the destructive nature of such service and the lack of mileage earnings. Occasionally, however, diverted cars are loaded for a long trip. Diversion increases the proportion of empty mileage to loaded, a condition which is beyond the power of the lessee to control. The mileage earned is very small. There have been some instances of diversion resulting in the entire loss of cars. In such cases the owner is of course reimbursed by the carrier. Frequently a car will be lost for as long as three months before it gets back to the lessee. He has, of course, been paying rent for it the entire time and has no recourse against the carrier.

Another form of misuse is the loading of improper freight in cars. This is done sometimes in making the return trip to the lessee, but more often while cars are lost or diverted. Tank cars are often loaded with damaging liquids and require cleaning at a considerable expense after returning home. Beef cars must be kept clean and sweet and should not be loaded with freight that will leave a taint. Refrigerators are often damaged by various forms of nonperishable freight that should not be carried in other than box cars. The expense of cleaning and making repairs resulting from loading improper freight in leased equipment must be paid by the lessee, although there have been instances of the lessee's collecting from railroads for such repairs.

The most harmful form of misuse by railroads is that of appropriating leased cars in switching service. First of all, the lessee is not only deprived of the use of the car, but he gets no mileage or earnings of any kind. Practically all breakage and petty theft occur in switching, and after a car is put in such local service it soon goes to the shops for repairs. A refrigerator misappropriated seldom carries perishables, but is loaded with other freight.

The tariff and misuse of private cars.—Some railroads have refused to pay the private car owners' claims for damage in the case of misused equipment on the ground that they had no tariff to cover such payments. A railroad company is compelled to pay another railroad 60 cents per day for a carrier's car so misused. There has been no tariff to apply to such misuse of private equipment, however, and the

carriers use the argument that were tariffs adopted to cover such misuse they would always be free to take the equipment and use it as they pleased by simply paying the stated charge and as a result the shipper would have to provide himself with a much greater number of cars.

A tariff so far as it covers proper use of equipment and really constitutes an agreement between the car owner or lessee and the railroad, controls charges, but tariffs do not govern unusual situations, as where private cars are appropriated for switching and local service, and they do not apply to the use of the car in such service against the expressed wish of the owner or lessee. Some delays are contemplated by tariffs, such as are beyond the control of both parties. The carrier should not be released from its duty or those within the carrier's control and beyond the control of the owner or lessee on the plea that a settlement would amount to a rebate because no tariff applies to the delay. The following is a representative case in point:

A small packing company in Chicago has failed in repeated attempts to collect $63 from a railroad for the misuse of one of its cars for a period of 63 days. This car, among others, was leased from a private car line and a rental of $1 per car per day was paid. During the period of misuse, this car was altogether out of the service of the packing company and was devoted to the switching and local service of the railroad which had diverted it, mainly between East St. Louis and St. Louis. No mileage was earned during this period and the packing company was required to pay rental for the car for which it received no service whatever. The railroad declined to make any reparation for the admitted misuse, stating that it was not covered in its tariff and the payment of this amount could be considered as a rebate. Upon inquiry of the Interstate Commerce Commission, the shipper was advised that it could not compel the railroad to pay the claim but that the packing company had the right to present its bill "and insist upon payment." This case is similar to others that confront the small shipper or car owner, although the carriers do not always refuse settlement on the grounds that there is no tariff to cover.

CHAPTER 4.

REFRIGERATION OF FRUITS AND VEGETABLES.

INTRODUCTION.

Refrigeration of perishables in transit has long been a subject for investigation by the Interstate Commerce Commission and, as stated in chapter 4, Part I, was given considerable attention by Congress to the extent of giving full jurisdiction over the subject to the Interstate Commerce Commission by the passage of the Hepburn Act in 1906. All fresh meats and packing-house products generally move under a charge for the ice or for the ice and salt supplied. (See Chap. 4, Part II.) Dairy products, such as dressed poultry, butter, eggs, and cheese receive refrigeration or icing service in transit, but the freight rate on these commodities includes the icing service.[1] All other commodities, including all kinds of fruits and vegetables requiring refrigeration in transit, are charged a special rate in addition to the freight rate for the service rendered. The rate on fruits and vegetables generally throughout the United States is a stated charge covering the refrigeration service from origin to point of destination. This charge has varied considerably in different sections of the country and formerly was based on weight of commodity, number of packages carried, or a flat charge per car. Until recently the rate has generally been applied as a certain number of cents per package or per hundred pounds with a prescribed weight minimum per car, excess in proportion. The practice is developing, however, and probably will become uniform, of making the charge when applied to carload shipments a stated amount per car irrespective of the weight carried.

Basis for stated refrigeration charge.—The reason given for the use of a different basis in the application of refrigeration rates in the case of fruits and vegetables from that used in the case of meats and packing-house products is that the service rendered by the carriers in transporting fruits and vegetables is distinctly one of refrigeration, whereas the service rendered the packers is only one of reicing. In the latter case the packer owns the car, the original icing and precooling is performed at the packer plant and the car when turned over to the carrier is already refrigerated and ready for transportation. The service that is then performed by the carrier is merely that of keeping the brine tanks replenished with sufficient crushed ice and salt to maintain the temperature required. The carrier is given instructions also which state specifically the places where reicing is to be performed and in general the amount of reicing. In the shipment of fruits and vegetables, on the other hand, the shipper

[1] National Poultry, Butter & Egg Association v. Baltimore & Ohio Southwestern Railroad Co. et al., 43 I. C. C., 392.

places an order with a railroad for a refrigerator car. This car must be initially iced by the carrier either upon delivery or immediately thereafter so that the inside temperature of the car may be lowered as rapidly as possible to reduce the field temperature of the products loaded. Responsibility for the condition on delivery of the articles carried rests entirely with the carrier and the icing and supervision en route is entirely in its hands. The service, therefore, for these commodities covers not only the application of ice to the cars, but also incidental services for which the carrier has been ordered to be reimbursed in various cases before the Interstate Commerce Commission. The items, payment for which is included in the refrigeration charge, are damage to bunkers, supervision, switching, haulage, profit, and hazard. These items will be explained in detail later in this chapter.

A large proportion of the fruits and vegetables marketed in the United States is carried and refrigerated by five car companies. Four of these are railroad owned companies separately incorporated but wholly railroad owned. The American Refrigerator Transit Co., the pioneer in the business, now performs refrigeration services for the Missouri Pacific and Wabash Railroads and formerly performed such service for 38 lines with which it had contracts.[1] The Frisco Refrigerator Line performs the service of refrigeration for the St. Louis-San Francisco Railway Co.; the Pacific Fruit Express Co. for the Union Pacific and Southern Pacific; and the Santa Fe Refrigerator Despatch for the Santa Fe system. The Fruit Growers Express, Inc., the fifth company, furnishes cars and performs the refrigeration service for railroads in the Southeast with which it has exclusive contracts. (See p. 164.)

By force of the exclusive contract the Fruit Growers Express has until recently supplied refrigerator cars and refrigeration service exclusively for 29 carriers in the Southeast, and its cars have also moved a considerable portion of the perishable freight from Michigan over the Pere Marquette and the Michigan Central. Some years ago a number of similar car companies existed which provided refrigerator cars for the transportation of fruits and vegetables. Principal among these were the Continental Fruit Express and the California Fruit Transportation Co. Several of these companies operated groups of cars under various trade names. These lines were bought up by Armour and Swift, but the Armours are the only ones now conducting a car line such as the Fruit Growers Express, Inc. Originally all these companies were independent of one another and competition among them was keen. The car companies were privileged to send cars over the lines of any carrier that the shipper might designate. The practice was for the railroad company to bill the shipper the full charge for the refrigeration service for the interest of the car line company. As intimated, free competition existed for only a few years, for the various companies were soon bought up and consolidated, and exclusive contracts secured with various trunk line railroads with feeders to the growing sections.

Rates under competition and under exclusive contract.—The rates for refrigeration service under competition were much less than after

[1] The names of these contract lines are presented in Exhibit 10.

exclusive contracts were secured. Examples of the Armour Car Lines having "enormously and unreasonably" increased the prices for refrigeration from Michigan points after its securing of an exclusive contract with the Pere Marquette Railroad have already been quoted (see p. 165) from the Interstate Commerce Commission's Report of 1904.

The same practice as adopted in Michigan was instituted by the Armour Car Lines when it began operating in the Southeast. It appears that wherever refrigeration service was performed exclusively by one company the refrigeration charges were as much as the traffic would bear, and were not based on any well-defined principle of rate making. It was not until several years later, when refrigeration rates came under review by the Interstate Commerce Commission in 1906 (see pp. 68 and 165), that an attempt was made to ascertain what expense was involved in the service rendered. The first notable case was initiated by the California fruit growers and is known as the Arlington Heights case.[1] Another case of more recent consideration was that of the Railroad Commission of the State of California *v.* Alabama Great Southern Railroad Co. et al.[2] Again in Westbound Transcontinental Refrigeration Charges,[3] the subject of rates and service was considered and the basis of charges analyzed. The present rates for refrigeration have been in existence for a number of years.

COST OF ICING.

As a general rule the service has improved not only from the standpoint of better equipment but also by a more scientific and intelligent application of refrigeration. Some companies operating in the large vegetable and fruit centers of southern California have gone so fas as to construct and equip large ice manufacturing plants with precooling devices at a total expense in several instances of three-fourths of a million dollars. The purpose of these precooling devices is to reduce the temperature of the car before loading and after loading to reduce rapidly the temperature of the fruit or vegetable and remove the field heat. When precooling is performed a less amount of reicing is necessary for delivery to destination. When the car is not precooled the initial application of ice requires from 9,000 to 10,500 pounds, depending upon the size of the bunkers. The heat of the fruit or vegetable in the car quickly reduces this ice and the first reicing is usually necessary before the car leaves the station of origin. Meltage of ice for the first 24 to 36 hours of the trip is exceedingly rapid. At the end of this time, however, the temperature is reduced sufficiently and so evenly distributed throughout the car that the meltage of ice in the bunkers is much less rapid. In the main these companies furnish block ice for the purpose of refrigerating fruits and vegetables. Occasionally a little salt is used in case of some shipments, since it has been learned that even a small amount of salt with ice reduces the temperature more quickly than when ice alone is used. Some of the icing stations operated by the various

[1] Arlington Heights Fruit Exchange et al. *v.* Southern Pacific Co. et al., 20 I. C. C., 106.
[2] 32 I. C. C., 17.
[3] 34 I. C. C., 140.

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·ormation submitted in the schedule filed by this company with ·mmission, the three stations at Texarkana, Palestine, and Ar- furnish crushed ice and salt in considerable quantities, as well ·ck ice, whereas the remaining three stations at Kansas City, ›uis, and Chicago furnish block ice chiefly, although according · schedule a slight amount of salt per ton of ice used was fre- ·ly furnished with block ice.

e Frisco Refrigerator Line furnishes refrigeration service chiefly ·he products carried in its own cars. The company does not store ·t its stations nor does it have any expense of overhead to meet. railroad company contracts with ice companies for delivery of ·o the bunkers. The only expense, therefore, to the refrigerator ·pany is that of the cost of ice per ton at the station plus the cost ·he salt used in the icing. Table 91 presents the icing cost for four ·esentative stations of this company:

BLE 91.—*Frisco Refrigerator Line—Costs of icing at four representative stations.*

Station and year.	Average cost ice per ton at station.[1]	Cost per hundred-weight salt at station.	Average pounds salt used per ton crushed ice.	Cost ice and salt per ton ice delivered to car.[2]
·t Smith, Ark.:				
1915	$3.50	$0.69	3.59	$3.52
1916	3.50	.71	9.37	3.57
1917	2.90	.83	5.49	2.95
ırvard, Ark.:				
1915	3.22	.57	47.78	3.49
1916	3.54	.605	81.96	4.04
1917	3.83	.645	80.09	4.35
ionett, Mo.:				
1915	3.25	.38	34.82	3.38
1916	3.25	.415	63.04	3.51
1917	3.42	.455	44.73	3.62
Kansas City, Mo.:				
1915	3.25	.54	3.51	3.27
1916	2.91	.56	7.35	2.95
1917	2.90	.68	3.36	2.92

[1] Represents cost block ice per ton in bunkers. Company estimated cost 1918 block ice per ton in bunkers Fort Smith, $4; Harvard, $4.25; Monett, $3.80; and Kansas City, $5.

[2] Represents cost crushed ice and salt per ton ice delivered to car. This company has no overhead. Ice is purchased from manufacturers to be delivered to bunkers.

The first column, representing the cost of block ice per ton in the bunkers, is fairly reasonable and uniform for the four stations. A small amount of salt is used with the block ice on the average and this increases the cost for this service slightly over that of block ice alone, as seen from the last column. It is interesting to note that at two stations, Fort Smith and Kansas City, the price of ice in 1917 declined considerably over the price for the two preceding years. Even at the other stations, while there was an increase each year from 1915, it was slight. The estimated cost for 1918, however, as shown in footnote 1, marks a considerable increase over the cost at any of the stations for 1917.

Table 92 presents the cost to the Pacific Fruit Express Co. for furnishing crushed ice and salt at five representative icing stations:

TABLE 92.—*Pacific Fruit Express Co.—Costs of crushed ice and salt at five representative icing stations.*

Station and year.	Average cost ice per ton at station.	Cost per hundredweight salt at station.	Average pounds salt used per ton ice.	Cost ice and salt per ton ice used in station.	Overhead per ton ice	Meltage per ton.	Total cost ice and salt per ton ice in car.
North Powder, Oreg.:							
1915	$0.21	$0.58	68.00	$0.61	$1.65	$0.05	$2.31
1916	.43	.605	200.00	1.64	3.35	.25	5.24
1917	.36						(1)
North Platte, Nebr.:							
1915	1.42	.50	147.28	2.16	1.66	.81	4.63
1916	.57	.481	150.31	1.29	2.30	.30	3.89
1917	.65	.475	161.41	1.42	2.05	.02	3.49
Roseville, Calif.:							
1915	.87	.394					(1)
1916	1.21	.362	44.79	1.37	.70	.28	2.35
1917	1.83	.401	83.42	2.16	2.12	.08	4.36
Portolo, Calif.:							
1915	2.10	.738					(1)
1916	3.28	.738	130.93	4.24	1.40		5.64
1917	2.26	.738	67.50	2.76	1.16		3.92
Fresno, Calif.:							
1915	2.65	.50					(1)
1916	3.05	.50	100.00	3.55	.11		3.66
1917	3.48	.50	69.66	3.83	.15		3.98

[1] Report no salt used for years indicated.

The total cost of ice and salt per ton of ice in the bunkers varies considerably from year to year, from station to station, and even during the three years at the same station. There seems to be no basis for comparison. The average cost of ice per ton varies as does also the expense of overhead per ton. A varying amount of salt per ton of ice is used at the several stations. The reason for this is not explained. The average amount required for icing fresh meats and packing-house products is probably from 150 to 300 pounds per ton of ice. A considerable amount of meltage was reported for the stations at North Powder, Oreg.; North Platte, Nebr.; and Roseville, Calif. In one year at North Platte this amounted to 81 cents per ton of ice used which, when added to the other expenses at this station, raised the cost considerably. Meltage per ton was added into the cost of icing by the commission because its object was to secure a final maximum cost to the company for furnishing ice and salt in the bunkers. The great variation in overhead remains unexplained. It varies from 11 cents in 1916 at Fresno, Calif., to $3.35 in 1916 at North Powder, Oreg. It is probable that unusual expenses may have occurred in these years but the fact that a smaller number of cars was iced at these stations accounts in part for the increase.

Table 93 represents a statement of the icing cost for block ice covering 10 representative stations of the Pacific Fruit Express Co.:

TABLE 93.—*Pacific Fruit Express Co.—Costs of block ice at 10 representative stations.*

Station and year.	Average cost of ice per ton at station.	Overhead per ton of ice.	Meltage per ton.	Total cost of ice per ton in bunkers.
North Powder, Oreg.:				
1915	$0.21	$1.65	$0.05	$1.91
1916	.43	3.35	.25	4.03
1917	.36	2.66	.16	3.18
Pocatello, Idaho:				
1915	3.78	(1)		3.78
1916	3.92			3.92
1917	3.60			3.60
North Platte, Nebr.:				
1915	1.42	1.66	.81	3.89
1916	.57	2.30	.30	3.17
1917	.65	2.05	.02	2.72
Roseville, Calif.:				
1915	.87	.97	.02	1.86
1916	1.21	.70	.28	2.19
1917	1.83	2.12	.08	4.03
Colton, Calif.:				
1915	.63	1.19	.02	1.84
1916	.83	1.10	.03	1.96
1917	.87	1.62	.28	2.77
Portolo, Calif.:				
1915	2.10	1.34		3.44
1916	3.28	1.40		4.68
1917	2.26	1.16		3.42
Fresno, Calif.:				
1915	2.65	.97		3.62
1916	3.05	.11		3.16
1917	3.48	.15		3.63
Las Vegas, Nev.:				
1915	1.35	4.65	.03	6.03
1916	1.35	3.63	.003	4.98
1917	1.66	6.01	.03	7.70
Yuma, Ariz.:				
1915	4.00	.61		4.61
1916	4.00	.67		4.67
1917	3.66	.48		4.14
El Paso, Tex.:				
1915	3.00	.41		3.41
1916	3.00	.49		3.49
1917	3.55	.36		3.91

[1] No overhead reported for station at Pocatello, Idaho.

At Las Vegas the icing cost in 1917 reached the highest point of the 10 stations, namely, $7.70. At none of the other stations in 1917 was there a marked increase over preceding years, a few even showing a considerable reduction in the costs. Icing service, as performed at the 10 stations listed in the foregoing table, often included the use of salt with block ice, according to the schedule submitted by the Pacific Fruit Express Co. The amount of salt so used was comparatively small, never going higher than 5 pounds per ton and ranging considerably less than that on the average. The schedule did not separate the service in this respect and therefore a column showing these averages is not presented.

Table 94 shows the cost to the Santa Fe Refrigerator Despatch for furnishing block ice and crushed ice for six representative icing stations:

TABLE 94.—*Santa Fe Refrigerator Despatch Co.—Costs of icing at six representative stations.*

Station and year.	Average cost of ice per ton at station.[1]	Cost per hundredweight of salt at station.	Average pounds of salt used per ton of crushed ice.	Cost of crushed ice and salt per ton of ice in car.
Fort Madison, Iowa:				
1915	$1.58	$0.18	243.29	$2.02
1916	1.58	.193	231.89	2.03
1917	1.62	.205	237.28	2.11
Argentine, Kans.:				
1915	2.17	.40	226.63	3.08
1916	2.24	.40	220.17	3.12
1917	2.25	.40	215.23	3.11
Cleburne, Tex.:				
1915	3.50	.361	234.75	4.35
1916	3.50	.401	226.69	4.41
1917	3.50	.487	201.69	4.48
Winslow, Ariz.:				
1915	3.29	.273	206.83	3.85
1916	3.41	.273	222.52	4.02
1917	3.44	.333	210.69	4.14
La Junta, Colo.:				
1915	3.82		202.19	[2]4.30
1916	4.10	.235	214.54	4.60
1917	2.88		208.52	[2]3.37
Bakersfield, Calif.:				
1915	2.65	.481	224.86	3.73
1916	2.65	.496	146.56	3.38
1917	2.90	.580	143.60	3.73

[1] Represents cost of block ice per ton in bunkers. Santa Fe Refrigerator Despatch Co. buys ice from Atchison, Topeka & Santa Fe Railway Co. at cost. Icing stations are operated by railway company and all operating expenses borne by it.
[2] No salt purchased in 1915 and 1917. Price of salt taken for year 1916 in estimating total cost.

The first column represents the cost of block ice per ton in the bunkers and remains fairly constant throughout the three years for the six stations. The fourth column represents the cost of crushed ice and salt per ton of ice in the bunkers. The amount of salt furnished per ton of ice is practically uniform, the greatest variation being at the station at Bakersfield. The price of ice is influenced by the location of the station, for the cheapest ice is secured at Fort Madison, Iowa, and the highest cost per ton to the company was at La Junta, Colo., in 1916. This was probably due to an ice shortage at the station and the necessity for shipping ice in from other points. The Santa Fe system contracts for the ice or manufactures it and sells to the Santa Fe Refrigerator Despatch at cost. The icing stations are operated by the railway company and all operating expenses, therefore, are borne by it.

The following statement, Table 95, covers the cost to the Fruit Growers Express, Inc., of furnishing ice at 9 platforms of the 10 owned in southeastern and north central United States.

TABLE 95.—*Fruit Growers Express, Inc.—Costs of icing at nine platforms.*

Platform and year.	Average cost ice per ton at platform.	Overhead per ton ice.	Total cost per ton ice in bunkers.
Benton Harbor, Mich.:			
1915	$1.81	$0.31	$2.12
1916	1.79	.31	2.10
1917	1.80	.52	2.32
Muskegon, Mich.:			
1915			
1916			
1917	1.67	.93	2.60
Michigan City, Ind.:			
1915	1.55	1.45	3.00
1916	1.43	1.22	2.65
1917	1.48	1.53	3.01
Fort Valley, Ga.:			
1915	4.06	.26	4.32
1916	4.01	.43	4.44
1917	4.10	.33	4.43
Marshallville, Ga.:			
1915	3.83	.33	4.16
1916	3.83	.32	4.15
1917	3.83	.30	4.13
Toccoa, Ga.:			
1915	4.07	.49	4.56
1916			
1917			
Rome, Ga.:			
1915	3.07	.42	3.49
1916	3.15	2.19	5.34
1917			
Jacksonville, Fla.:			
1915			
1916	2.58	.58	3.16
1917	2.67	.78	3.45
High Springs, Fla.:			
1915	4.33	1.18	5.51
1916			
1917			

The average cost of ice for the first three platforms is practically uniform, ranging from $1.43 at Michigan City, Ind., in 1916, to $1.81 at Benton Harbor in 1915. The average cost of ice at the other platforms given is higher, which undoubtedly is due to the fact that they are located in territory where the only ice that can be secured is manufactured. The highest average cost was for the year 1917 at Fort Valley, Ga. The overhead, with few exceptions, averages about 50 cents a ton. At Rome, Ga., in 1916, it reached the highest mark of $2.19 per ton. For several years at Michigan City and for 1915 at High Springs the overhead per ton exceeded $1. All these cases are caused by the small amount of business handled during the year and the cost per ton is therefore greater. Generally ice can be secured under contract with ice manufacturing companies, the price to cover

delivery in the bunkers, for a lower cost than it can be furnished at the platforms owned and operated by the car company. The average price of ice in Florida and Georgia is $3.50. The average cost for the ice furnished by the Fruit Growers Express, Inc., at its own platforms is between $4 and $4.50. The average for the company platforms in Michigan and Indiana, however, is for some years below the cost of ice when purchased from railroad-operated stations, which in this territory is $2.50 per ton of ice. From the fact that the Fruit Growers Express, Inc., is year by year diminishing the number of platforms actually operated it may be assumed that this service is unprofitable. Ice may be purchased from outside manufacturing companies and delivered to the bunkers at a lower cost than it can be furnished by the company itself. The service, too, is just as efficient.

The operation of icing stations by the various railroad owned companies differs in several respects. In the first place, the parent railroad company owns the stations in two instances and operates them so that the refrigerator car company has no overhead expense. These same companies secure their ice through the railroad company at cost. The other two companies, on the other hand, own, operate, and conduct the icing stations and the entire business of securing and furnishing ice. The Pacific Fruit Express Co. is the only refrigerator car company which manufactures the ice used on its lines in any considerable quantity. It has several large ice manufacturing plants located at Colton and Roseville, Calif., and Las Vegas, Nev., and at two of these stations, Roseville and Colton, Calif., has equipment for precooling. It harvests the natural ice for use at its stations at North Powder, Oreg., and North Platte, Nebr. The Santa Fe system also owns and operates large icing plants in the Southwest and in addition has several precooling stations. The American Refrigerator Transit Co. purchases all the ice used by it. It maintains and operates coolers or cold storage warehouses for its convenience in assembling and concentrating l. c. l. freight. Two of these are located at St. Louis, one at Chicago, one in Detroit, and one in Kansas.[1]

The Fruit Growers Express, Inc., since 1914 owns the stations and platforms formerly owned by the Armour Car Lines. At the present time, as previously stated in chapter 4, Part II, only 17 stations and platforms are owned by the Fruit Growers Express, Inc., nine of which are at present operated, seven are leased to private companies, and the platform at Meggetts, S. C., has not been operated since 1915. This company secures its ice by contracts, which extend in most cases over a long term of years, with private ice manufacturing companies near the point where the icing is required. The ice manufacturing company is required to store a specified amount of ice, as stated in the contract, during the slack season of the winter and by so doing is able to furnish manufactured ice in a decidedly warm climate where the ice manufacturing cost is high, at a reasonably low price.

The cost and selling price for ice in the bunkers, for the years 1915 to 1917, inclusive, and estimated figures for 1918, are presented as an exhibit (Exhibit II). The companies for which these figures are given are representative for points throughout the eastern, southern, and central sections of the United States and present a fair picture of the cost for furnishing ice for the purpose of refrigerating perishables

[1] I. C. C. Docket 4906, V. 62, p. 2875.

in transit. The table shows that the selling price for ice delivered to bunkers at all competitive points is practically uniform and in some instances does not appear to be affected by the cost of manufacturing. At other points where the location of a station gives the ice company a monopoly in the service of supplying ice, the price demanded is often greatly in excess of the cost of manufacturing.[1]

COMPARISON BETWEEN COSTS OF ICE AND STATED CHARGES FOR REFRIGERATION.

The following tables (Tables 96–100, inclusive) are prepared from data submitted by the four railroad-owned private car companies and the Fruit Growers Express, Inc. The purpose is to show for the year 1917, for which data was available, the contrast between the average per car cost to the company for furnishing the ice and the charge collected from the shipper for the service. The stated charge for refrigeration includes besides the ice certain incidental charges allowed by the Interstate Commerce Commission. These incidental charges are discussed later, and separate tables given (Tables 101-105). These incidental charges should be taken into consideration in comparing the cost of ice and the refrigeration charges set forth in Tables 96–100.

Each company was asked to submit detailed information covering the shipment of various perishable commodities handled by the company from representative points of origin to representative distribution centers. The information was submitted in detail for each instance and the conclusions presented in the tables are made up from the data covering the movement of 10 or more representative cars. In all instances these cars were so scattered throughout the year as to make the variation in the amounts of ice required representative for a year's business. The average cost of ice per car in each instance is as accurate and representative as it was possible for the car company to secure it for it is made up from actual car records.

Table 96 compares the average cost of ice per car with the stated charge for representative points served by the American Refrigerator Transit Co.:

TABLE 96.—*American Refrigerator Transit Co.—Comparison of average cost of icing per car to refrigeration rate.*

From—	To—	Miles.	Average pounds ice initial.	Average pounds first reicing.	Average pounds all reicings.	Average number of reicings.	Average pounds ice per car.	Average cost ice per car.	Refrigeration rate.	Difference cost of ice and rate.
PEACHES.										
Jacksonville, Tex..	St. Louis.........	656	9,000	7,000	3,933	3	20,800	$36.57	$50.00	$13.43
	Chicago..........	944	9,000	5,850	3,308	4	22,230	37.84	55.00	17.16
	Pittsburgh......	1,268	9,000	5,214	3,393	6	29,355	47.09	67.00	19.91
Highland, Ark.....	New York City..	1,436	9,000	6,240	4,063	6	33,380	50.42	70.00	19.58
CANTALOUPS.										
Blevins, Ark.......	Chicago..........	747	9,000	5,380	3,933	3	20,800	34.27	52.00	17.73

[1] The table showing cost and selling price of ice delivered to bunkers is presented as Exhibit 11.

The difference between the cost of ice and refrigeration rate in the foregoing examples is practically uniform, ranging from $13.43 for a shipment of peaches from Jacksonville, Tex., to St. Louis, a distance of 656 miles, to $19.91 for a shipment to Pittsburgh, a distance of 1,268 miles. The average amount of ice required per car varies uniformly with the distance. The average amount of ice used for each reicing is also practically uniform.

Table 97 presents a comparison of the average cost of ice per car and the refrigeration rate for peaches and strawberries carried by the Frisco Refrigerator Line.

TABLE 97.—*Frisco Refrigerator Line—Comparison of average cost of ice per car to refrigeration rate.*

From—	To—	Miles.	Average pounds ice initial.	Average pounds first reicing.	Average pounds all reicings.	Average number of reicings.	Average pounds ice per car.	Average cost ice per car.	Refrigeration rate.	Difference cost of ice and rate.
PEACHES.										
Koshkonong, Mo...	New York........	1,429	9,660	3,870	2,652	6	25,570	$46.83	$67.17	$20.34
	Buffalo...........	1,087	8,500	4,370	2,826	7	28,284	50.45	66.14	15.69
	Pittsburgh.......	980	4,250	4,875	3,346	6	24,325	44.49	65.20	20.71
	Chicago..........	658	8,500	4,720	3,265	4	21,560	39.76	55.03	15.27
STRAWBERRIES.										
Monett, Mo........	Minneapolis......	737	11,300	2,230	1,527	3	15,880	24.65	50.19	25.54
	St. Paul..........	726	11,230	2,720	1,597	3	16,020	24.95	50.22	25.27
	Omaha............	392	11,980	600	1,265	2	14,510	23.22	42.56	19.34
	Kansas City......	196	12,280	950	945	2	14,170	22.79	41.23	18.44

The contrast between a short movement and a long movement and the comparatively greater cost for the shorter haul is clearly shown in this table. The cost for strawberries, Monett to Kansas City, a distance of 196 miles, is $22.79. The cost for shipping the same commodity from the same point to Minneapolis, a distance of 737 miles, is $24.65. The latter movement is almost four times the former and yet the cost for the ice is only slightly greater. This illustrates the fact that additional reicings on the longer movement require a decreasing amount of ice. The original icing and the first two reicings require a considerable amount of ice, while additional reicings never require more than from one to two tons per car. The difference between the cost of ice and the refrigeration rate varies considerably for each example and in the case of peaches seems to bear no relation to the length of the haul. In the case of strawberries, which are shipped only comparatively short distances, there seems to be a direct relation between the distance and the excess of rate over expenses. The rate charged for refrigeration by the Frisco Refrigerator Line is in odd cents per car. This is due to the fact that the rate charged by this company is based on the weight or number of packages of the commodity carried with a prescribed weight minimum, and excess is charged in proportion.

Table 98 compares the cost of ice and the rate for shipment of green fruits, citrus fruits, vegetables, and cantaloups from Southern Pacific

points in California, from the Imperial Valley, Calif., and from north coast territory, Oregon, to the principal markets.

TABLE 98.—*Pacific Fruit Express Co.—Comparison of average cost of ice per car to refrigeration rate.*

From—	To—	Miles.	Average pounds ice initial icing.	Average pounds first reicing.	Average pounds all reicings.	Average number of reicings.	Average pounds ice per car.	Average cost ice per car.	Refrigeration rate.	Difference cost of ice and rate.
GREEN FRUITS.										
Southern Pacific points in California.	Chicago	2,180	11,000	4,200	2,412	7	28,455	$47.67	$75.00	$27.33
	New York	3,100	11,000	4,680	2,432	10	36,100	54.61	87.50	32.89
	Boston	3,200	10,600	3,980	1,972	12	33,280	53.10	90.00	36.90
	New Orleans	2,400	10,600	3,810	2,524	11	38,555	68.29	80.00	11.71
CITRUS FRUITS.										
Southern Pacific points in California.	Chicago	2,250	11,000	2,080	2,005	8	26,135	38.80	65.00	26.20
	Pittsburgh	2,700	11,000	3,420	1,735	10	28,150	43.28	75.00	31.72
VEGETABLES.										
Southern Pacific points in California.	Chicago	2,200	11,000	2,725	1,555	7	22,472	35.10	55.00	19.90
	New Orleans	2,250	11,000	1,690	1,426	10	25,750	46.11	60.00	13.89
CANTALOUPS.										
Southern Pacific points in California.	Chicago	2,240	11,000	7,270	3,016	9	36,440	56.41	75.00	18.59
	Pittsburgh	2,690	10,400	6,840	2,744	11	40,210	59.46	85.00	25.54
	Boston.	3,250	10,500	5,700	2,200	13	38,555	58.75	90.00	31.25
GREEN FRUITS.										
Imperial Valley, Calif.	Chicago	2,090	11,000	6,688	3,405	8	36,838	87.73	90.00	2.27
CANTALOUPS.										
Imperial Valley, Calif.	Chicago	2,090	10,400	6,010	3,382	8	35,770	86.12	97.50	11.38
	Cincinnati	2,350	11,000	3,840	3,080	10	40,176	91.27	107.50	16.23
	New York	3,000	11,000	5,100	2,697	11	38,410	88.01	110.00	21.99
	Boston	3,200	10,800	4,030	2,472	12	40,470	86.58	112.50	25.92
VEGETABLES.										
Imperial Valley, Calif.	Chicago	2,090	11,000	1,280	940	7	17,500	46.38	70.00	23.62
	New York	3,000	11,000	2,070	1,050	9	20,690	50.90	82.50	31.60
GREEN FRUITS.										
North coast, Oreg.	Chicago	2,200	11,000	4,355	2,367	10	31,515	53.79	60.00	6.21

The difference between the cost of ice and the rate appears generally to be greater for shipments from Southern Pacific points than for shipments from the Imperial Valley. Green fruits shipped from Imperial Valley to Chicago show a difference between the cost of ice and the rate of only $2.27; the difference between the cost and rate for green fruits from north coast points, Oregon, to Chicago is also low, being $6.21. In practically all other instances the difference between the cost of the ice and the refrigeration rate is considerably more. Vegetables require a less amount of ice than do citrus fruits or green fruits. Cantaloups, because of their extreme perishability, require more ice as a general rule than any other fruit or vegetable with the exception of berries. The shipments in the foregoing table are representative for movements over the Southern Pacific through

Arizona and New Mexico and over the Union Pacific through Nevada and Utah. The icing cost over each route is practically identical.

Table 99 presents a comparison between the average cost of ice per car and the rate charged by the Santa Fe Refrigerator Despatch Co. for the shipment of California green fruits and cantaloups, northern California vegetables, peaches from Oklahoma, Rocky Ford cantaloups, and southern California citrus fruits.

TABLE 99.—*Santa Fe Refrigerator Despatch Co.—Comparison of average cost of ice per car to refrigeration rate.*

From—	To—	Miles.	Average pounds ice initial icing.	Average pounds first reicing.	Average pounds all reicings.	Average number of reicings.	Average pounds ice per car.	Average cost ice per car.	Refrigeration rate.	Difference cost of ice and rate.
CALIFORNIA GREEN FRUITS.										
Del Rey, Calif.	Chicago	2,320	9,750	5,812	2,444	9	30,525	$44.10	$75.00	$30.90
Fresno, Calif.	Chicago	2,404	10,500	2,550	1,600	8	22,500	32.71	70.00	37.29
S. F. P. & P. CANTALOUPS.[1]										
Glendale, Ariz.	Chicago	1,899	9,250	5,470	2,835	8	30,020	71.40	97.50	26.10
NORTHERN CALIFORNIA VEGETABLES.										
San Francisco, Calif.	Chicago	2,514	10,500	2,850	1,550	9	23,290	36.16	52.50	16.34
Antioch, Calif.	Chicago	2,466	10,500	2,550	2,194	9	28,150	41.24	52.50	11.26
PEACHES.										
Dutcher, Okla.	Chicago	796	9,780	5,070	3,700	4	24,950	45.32	52.50	7.18
ROCKY FORD CANTALOUPS.										
Rocky Ford, Colo.	Chicago	1,010	9,420	4,460	3,000	4	21,710	28.32	50.00	21.68
SOUTHERN CALIFORNIA CITRUS FRUITS.										
Glendora, Calif.[2]	Chicago	2,176	9,870	2,640	2,220	7	30,730	46.60	[3] 62.50	15.90

[1] Shipments of cantaloups originating on the Santa Fe, Prescott and Phoenix Lines in Arizona.
[2] Cars precooled at Glendora. Average amount ice used 6,000 pounds, average cost, $9.13.
[3] Cars initially iced before loading $2.50 higher than regular rate of $60.

The difference between the cost of ice and the rate varies only slightly, the greatest difference being the case of California green fruits moving from Del Rey and Fresno, Calif., to Chicago. All the examples in the foregoing table use Chicago as the point of destination. This is because of the fact that Chicago is a representative point for distributing perishable products and for that reason it is often taken as a breaking point in the rate. Shipments moving through Chicago to the East not only take a proportionate increase in the rate, based on distance, but the cost for the service also increases proportionately.

Table 100 presents a comparison between the costs of ice to the Fruit Growers Express, Inc., and the refrigeration charges for the shipment of vegetables and citrus fruits, peaches, cantaloups, and strawberries from points in Florida, Georgia, South and North Carolina to representative distributing markets.

TABLE 100.—*Fruit Growers Express Inc.—Comparison of average cost of ice per car to refrigeration rate.*

From—	To—	Miles.	Average pounds ice initial.	Average pounds first reicing.	Average pounds all reicing.	Average number of reicings.	Average pounds ice per car.
VEGETABLES AND CITRUS FRUITS.[1]							
Palmetto, Fla.	New York City	1,193	9,600	4,000	2,750	4	20,600
	Boston	1,341	9,600	4,000	3,000	5	24,600
	Cincinnati	1,004	9,600	4,000	2,600	5	22,600
	Chicago	1,341	9,600	4,000	2,600	5	22,600
	New Orleans	811	9,600	4,000	3,000	4	21,600
PEACHES.							
Fort Valley, Ga.	New York City	990	9,600	5,000	3,625	4	24,100
	Boston	1,214	9,600	5,000	3,500	5	27,100
	Cincinnati	614	9,600	5,000	4,000	3	21,600
	Chicago	968	9,600	5,000	3,400	5	26,600
	New Orleans	648	9,600	5,000	4,166	3	22,100
CANTALOUPS.							
Camilla, Ga.	New York City	1,056	9,600	6,500	3,600	5	27,600
	Boston	1,278	9,600	6,500	3,833	6	32,600
	Cincinnati	781	9,600	6,000	3,625	4	24,100
	Chicago	1,040	9,600	6,500	4,875	4	29,100
VEGETABLES.							
Charleston, S. C.	New York City	727	9,600	4,000	3,166	3	19,100
	Boston	945	9,600	4,000	3,250	4	22,600
	Cincinnati	789	9,600	4,000	2,900	5	24,100
	Chicago	1,074	9,600	4,000	3,500	6	27,100
STRAWBERRIES.							
Chadbourn, N. C.	New York City	606	9,600	3,000	2,333	3	16,600
	Boston	830	9,600	3,000	2,250	4	18,600
CANTALOUPS.							
Laurinburg, N. C.	New York City	591	9,600	6,000	4,000	3	21,600
	Boston	809	9,600	6,000	3,750	4	24,600
VEGETABLES.							
Wilmington, N. C.	New York City	568	9,600	3,000	2,333	3	16,600
	Boston	792	9,600	3,000	2,750	4	20,600

From—	To—	Average cost ice per car.	Refrigeration rate.		Difference cost of ice and rate.	
			Vegetables.	Citrus fruits.	Vegetables.	Citrus fruits.
VEGETABLES AND CITRUS FRUITS.[1]						
Palmetto, Fla.	New York City	$35.13	$66.00	$65.00	$30.87	$29.87
	Boston	40.13	72.00	71.00	31.87	30.87
	Cincinnati	38.49	66.00	65.00	27.51	26.51
	Chicago	38.99	72.00	71.00	33.01	32.01
	New Orleans	37.81	64.00	58.00	26.19	20.19
PEACHES.						
Fort Valley, Ga.	New York City	41.06	58.85		17.79	
	Boston	44.81	66.88		22.07	
	Cincinnati	37.38	53.50		16.12	
	Chicago	46.41	58.85		12.44	
	New Orleans	38.19	53.50		15.31	
CANTALOUPS.						
Camilla, Ga.	New York City	44.18	58.00		13.82	
	Boston	50.43	64.00		13.57	
	Cincinnati	39.32	54.00		14.68	
	Chicago	48.60	58.00		9.40	
VEGETABLES.						
Charleston, S. C.	New York City	31.04	50.00		18.96	
	Boston	35.42	56.00		20.58	
	Cincinnati	40.72	60.00		19.28	
	Chicago	45.60	64.00		18.40	
STRAWBERRIES.						
Chadbourn, N. C.	New York City	27.05	64.50		37.45	
	Boston	29.55	70.50		40.95	
CANTALOUPS.						
Laurinburg, N. C.	New York City	34.28	56.00		21.72	
	Boston	38.03	60.00		21.97	
VEGETABLES.						
Wilmington, N. C.	New York City	23.59	50.00		26.41	
	Boston	28.59	56.00		27.41	

[1] Icing for citrus fruits approximates that required for vegetables.

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The difference between the cost of ice and the rate charged for some commodities is considerable. For instance, the difference in the case of strawberries from Chadbourn, N. C., to Boston is $40.95. The difference in the case of vegetables and citrus fruits from Florida to Chicago is also high in comparison with the rate, averaging $32.50. The difference between the cost of ice and the rate for a short haul is considerably greater than the difference in the case of a long haul.

INCIDENTAL REFRIGERATION CHARGES.

In addition to the cost of ice there are additional charges that are included in the refrigeration rate. These charges have been the subject of controversy at various times, but have been sustained by the Interstate Commerce Commission as being legitimate items that should go to make up stated refrigeration charges. These charges may be listed and described as follows:

1. *Damage to bunkers.*—This charge is an average allowance of $5 per trip for wear and tear to refrigerating devices.

2. *Supervision.*—This charge averages about $4 per trip and is permitted the car company for the service of supervision and administration.

3. *Switching.*—Every car to be iced must be spotted at the platform of the icing station. This service of switching adds a 25-cent charge per car each time a car is spotted for icing, which charge is payable to the carrier.

4. *Haulage.*—This is an item allowed the carrier for the service of hauling the ice in the bunker. It is based on an estimate of the average amount of ice carried for the entire trip from origin to point of destination. The charge is 1 cent per hundred pounds of ice per hundred miles of distance it is carried.

5. *Profit and hazard.*—These items comprise a variable amount, being fixed at 8 per cent of the total of all charges previously mentioned, including the cost of ice; 6 per cent is allowed for profit and 2 per cent for hazard.

It may be seen that the rate for refrigeration is estimated from a number of charges for services, some of which are performed by the car line and some by the carrier. It would seem that only three of these might properly be charged to expenses of the refrigerator-car company, namely, damage to bunkers, supervision, and profit and hazard. The other two, switching and haulage, comprise services rendered by the carrier itself. The car companies, however, performing refrigeration service under the stated charge make no allowance to any carrier either for haulage or switching. In other words, the entire stated charge which comprises the cost of ice and all these incidental charges is collected for the interest of the car company and no part of the revenue is passed on to the carrier. The reason given for including such incidental charges as haulage and switching in the refrigeration rate is that the cost of such service is properly chargeable to the shipper, and as it is not included in the freight rate must necessarily, therefore, be taken care of in the refrigeration charge. Inasmuch as four of the car companies performing refrigeration service are to all intents and purposes special operating departments of the owning railroad companies, it is immaterial whether any allowance is made for haulage or switching. The net revenue in any event will finally reach the railroad company.

In the case of the Fruit Growers Express Inc., however, the situation is essentially different. The refrigeration rate in the case of this company is predicated on the same incidental items as are used by the railroad-owned companies, including haulage and switching. The item of haulage, however, which is the highest of the incidental charges, is not paid to the carrier which transports the car, but is retained by the car company. Provision that the carrier shall not charge the car line company for the movement of ice contained in the bunkers of its cars is made in the exclusive contract as follows:

The Railroad shall make no charge against the car line for movement of dry or iced refrigerator cars over its rails for protection of business covered by this contract, nor shall it make any charge for the movement of ice contained in the bunkers of such cars, but when ice is shipped in the bodies of such cars or in bodies of any other cars for the protection of cars in loading, the charge for the transportation of such ice shall be made on the basis of the regularly published carload freight rate per hundred weight or per ton for the actual weight of the ice shipped.

It may be seen, therefore, that the stated charge in the case of the Fruit Growers Express Inc. includes an item that is not assignable to a service performed by the company. Revenue from the charge for haulage should, therefore, be added to profit and hazard of the company and will increase the net returns materially.

Tables are presented which show for each car line company the incidentals which are used in determining the refrigeration charge. It should be remembered that no part of the rate is assigned to a carrier for service seemingly rendered by it. This is true not only of the railroad-owned companies but of the Fruit Growers Express Inc. as well. Table 101 presents an analysis of the incidental items that make up the charge levied by the American Refrigerator Transit Co. and shows the difference between the rate levied and the estimated expense of refrigeration.

TABLE 101.—*American Refrigerator Transit Co.—Incidental refrigeration charges used in determining rate.*

From—	To—	Damage to bunkers.	Supervision.	Switching.	Haulage.	Total incidental charges.	Difference actual cost ice and rate.	Profit and hazard.
PEACHES.								
Jacksonville, Tex.	St. Louis	$5.00	$4.00	$1.00	$3.97	$13.97	$13.43	−$0.54
	Chicago	5.00	4.00	1.25	5.99	16.24	17.16	.92
	Pittsburgh	5.00	4.00	1.75	7.72	18.47	19.91	1.44
Highland, Ark.	New York City.	5.00	4.00	1.75	7.92	18.67	19.58	.91
CANTALOUPS.								
Blevins, Ark.	Chicago	5.00	4.00	1.00	4.53	14.53	17.73	3.20

The last column, under the caption "Profit and hazard," shows that on a shipment of peaches from Jacksonville, Tex., to St. Louis the company loses on the average 54 cents a car. From the rates shown in the table the greatest gain per car on the average is for cantaloups from Blevins, Ark., to Chicago. All the incidental charges are practically uniform, with the exception of haulage, which varies directly with the amount of ice carried and the distance. It would appear from the foregoing table that the American Refrigerator Transit Co. is operating on a narrow margin, for only a slight amount remains to cover profit and hazard. As a matter of fact, in 1917 the profit to the car company amounted to only 2 per cent on the investment.

Table 102 presents incidental refrigeration charges for representative shipments by the Frisco Refrigerator Line.

TABLE 102.—*Frisco Refrigerator Line—Incidental refrigeration charges used in determining rate.*

From—	To—	Damage to bunkers.	Supervision.	Switching.	Haulage.	Total incidental charges.	Difference actual cost ice and rate.	Profit and hazard.
PEACHES.								
Koshkonong, Mo	New York City	$5.00	$4.00	$1.75	$10.56	$21.31	$20.34	—$0.97
	Buffalo	5.00	4.00	2.00	6.55	17.55	15.69	— 1.86
	Pittsburgh	5.00	4.00	1.75	1.35	12.10	20.71	8.61
	Chicago	5.00	4.00	1.25	3.87	14.12	15.27	1.15
STRAWBERRIES.								
Monett, Mo	Minneapolis	5.00	4.00	1.00	7.48	17.48	25.54	8.06
	St. Paul	5.00	4.00	1.00	7.28	17.28	25.27	7.99
	Omaha	5.00	4.00	.75	4.37	14.12	19.34	5.22
	Kansas City	5.00	4.00	.75	2.28	12.03	18.44	6.41

In two instances, namely, peaches from Koshkonong to New York City and Buffalo, the company lost 97 cents and $1.86 per car, respectively. In all other cases cited in the table there was a substantial gain. Notwithstanding the fact that the table indicates that the company may have made a fair profit on its service of refrigeration, yet the financial statement of the company shows that on its total operations it suffered a loss of approximately 2 per cent on the investment.

Table 103 presents incidental refrigeration charges for representative shipments by the Pacific Fruit Express Co.

TABLE 103.—*Pacific Fruit Express Co.—Incidental refrigeration charges used in determining rate.*

From—	To—	Damage to bunkers.	Supervision.	Switching.	Haulage.	Total incidental charges.	Difference actual cost ice and rate.	Profit and hazard.
GREEN FRUITS.								
Southern Pacific points in California.	Chicago	$5.00	$4.00	$2.00	$19.38	$30.38	$27.33	—$3.05
	New York City	5.00	4.00	2.75	27.25	39.00	32.89	— 6.11
	Boston	5.00	4.00	3.25	28.10	40.35	36.90	— 3.45
CITRUS FRUITS.	New Orleans	5.00	4.00	3.00	19.89	28.89	11.71	—17.18
Southern Pacific points in California.	Chicago	5.00	4.00	2.25	20.74	31.99	26.20	— 5.77
	Pittsburgh	5.00	4.00	2.75	25.44	37.19	31.72	— 5.49
VEGETABLES.								
Southern Pacific points in California.	Chicago	5.00	4.00	2.00	21.18	32.18	19.90	—12.28
	New Orleans	5.00	4.00	2.75	21.83	33.58	13.89	—19.69
CANTALOUPS.								
Southern Pacific points in California.	Chicago	5.00	4.00	2.50	18.56	30.06	18.59	—11.47
	Pittsburgh	5.00	4.00	3.00	21.21	33.21	25.54	— 7.67
GREEN FRUITS.	Boston	5.00	4.00	3.50	27.49	39.99	31.25	— 8.74
Imperial Valley, Calif	Chicago	5.00	4.00	2.25	16.64	27.89	2.27	—25.62
CANTALOUPS.								
Imperial Valley, Calif	Chicago	5.00	4.00	2.25	15.45	26.70	11.38	—15.32
	Cincinnati	5.00	4.00	2.75	19.27	31.02	16.23	—14.79
	New York City	5.00	4.00	3.00	25.58	37.58	21.99	—15.59
VEGETABLES.	Boston	5.00	4.00	3.25	26.07	38.32	25.92	—12.40
Imperial Valley, Calif	Chicago	5.00	4.00	2.00	21.27	32.27	23.62	— 8.65
GREEN FRUITS.	New York City	5.00	4.00	2.50	30.17	41.67	31.60	—10.07
North Coast, Oreg	Chicago	5.00	4.00	2.75	19.47	31.22	6.21	—25.01

In every instance the table indicates that the company operated at a loss. The item of haulage is a constantly increasing one and in most instances is greater than the difference between the actual cost of the ice used and the rate. In some cases it appears this allowance for haulage is out of proportion with the other charges used in determining the rate. Notwithstanding the fact that the representative shipments presented in the table indicate an average loss, the car company for the year 1917 made an average net profit of 8 per cent on the investment.

This apparent discrepancy is due to the fact that the car company makes no allowance to the carriers for switching and haulage. In other words, these incidental charges which have been considered legitimate items in the computation of stated refrigeration rates are not actually borne by the company to whom the charge is paid. This is true not only for the Pacific Fruit Express Co. but also for the other refrigerator car companies doing a similar business.

Table 104 presents the incidental refrigeration charges for the Santa Fe Refrigerator Despatch Co.:

TABLE 104.—*Santa Fe Refrigerator Despatch Co.—Incidental refrigeration charges used in determining rate.*

From—	To—	Damage to bunkers.	Supervision.	Switching.	Haulage.	Total incidental charges.	Difference actual cost ice and rate.	Profit and hazard.
CALIFORNIA GREEN FRUITS.								
Del Rey, Calif.	Chicago	$5.00	$4.00	$2.50	$17.52	$29.02	$30.90	$1.88
Fresno, Calif.	do	5.00	4.00	2.25	21.82	33.07	37.29	4.22
S. F. P. & P. CANTALOUPS.[1]								
Glendale, Ariz.	Chicago	5.00	4.00	2.25	12.78	24.03	26.10	2.07
NORTHERN CALIFORNIA VEGETABLES.								
San Francisco, Calif.	Chicago	5.00	4.00	2.50	22.89	34.39	16.34	−18.05
Antioch, Calif.	do	5.00	4.00	2.50	21.02	32.52	11.26	−21.26
PEACHES.								
Dutcher, Okla.	Chicago	5.00	4.00	1.25	5.43	15.68	7.18	− 8.50
ROCKY FORD CANTALOUPS.								
Rocky Ford, Colo.	Chicago	5.00	4.00	1.25	7.09	17.34	21.68	4.34
SOUTHERN CALIFORNIA CITRUS FRUITS.								
Glendora, Calif.	Chicago	5.00	4.00	2.00	17.25	28.25	15.90	−12.35

[1] Shipments of cantaloups originating on the Santa Fe, Prescott & Phoenix Lines in Arizona.

Haulage, as in the case of the Pacific Fruit Express Co., is the principal item in the charge. The only material per car loss is in the case of vegetables from northern California.

Losses per car greatly exceed per car profits. The car company, however, shows a slight profit for the year 1917. This apparent discrepancy may be explained on the same ground as the Pacific Fruit Express Co.

Table 105 presents the incidental refrigeration charges for representative shipments by the Fruit Growers Express Inc.

TABLE 105.—*Fruit Growers Express Inc.—Incidental refrigeration charges used in determining rate.*

From—	To—	Damage to bunkers.	Supervision.	Switching.	Haulage.	Total incidental charges	Difference actual cost ice and rate.		Profit and hazard.	
							Vegetables.	Citrus fruits.	Vegetables.	Citrus fruits.
VEGETABLES AND CITRUS FRUITS.[1]										
Palmetto, Fla.	New York City	$5.00	$4.00	$1.25	$8.83	$19.08	$30.87	$29.87	$11.79	$10.79
	Boston	5.00	4.00	1.50	10.06	20.06	31.87	30.87	11.81	10.81
	Cincinnati	5.00	4.00	1.50	7.43	17.93	27.51	26.51	9.58	8.58
	Chicago	5.00	4.00	1.50	9.92	20.42	33.01	32.01	12.59	11.59
	New Orleans	5.00	4.00	1.25	5.84	16.09	26.19	20.19	10.10	4.10
PEACHES.										
Fort Valley, Ga.	New York City	5.00	4.00	1.25	6.63	16.88	$17.79		$0.91	
	Boston	5.00	4.00	1.50	8.11	18.61	22.07		3.46	
	Cincinnati	5.00	4.00	1.00	4.05	14.05	16.12		2.07	
	Chicago	5.00	4.00	1.50	6.55	17.05	12.44		−4.61	
	New Orleans	5.00	4.00	1.00	4.20	14.20	15.31		1.11	
CANTALOUPS.										
Camilla, Ga	New York City	5.00	4.00	1.50	6.97	17.47	13.82		−3.65	
	Boston	5.00	4.00	1.75	8.07	18.82	13.57		−5.25	
	Cincinnati	5.00	4.00	1.25	5.23	15.48	14.68		−.80	
	Chicago	5.00	4.00	1.25	5.93	16.18	9.40		−6.78	
VEGETABLES.										
Charleston, S. C.	New York City	5.00	4.00	1.00	5.25	15.25	18.96		3.71	
	Boston	5.00	4.00	1.25	6.62	16.87	20.58		3.71	
	Cincinnati	5.00	4.00	1.50	5.67	16.17	19.28		3.11	
	Chicago	5.00	4.00	1.75	7.09	17.84	18.40		.56	
STRAWBERRIES.										
Chadbourn, N. C.	New York City	5.00	4.00	1.00	4.76	14.76	37.45		22.69	
	Boston	5.00	4.00	1.25	6.47	16.72	40.95		24.23	
CANTALOUPS.										
Laurinburg, N. C.	New York City	5.00	4.00	1.00	3.90	13.90	21.72		6.82	
	Boston	5.00	4.00	1.25	5.34	15.59	21.97		6.38	
VEGETABLES.										
Wilmington, N. C.	New York City	5.00	4.00	1.00	4.46	14.46	26.41		11.95	
	Boston	5.00	4.00	1.25	5.86	16.11	27.41		11.30	

[1] Icing for citrus fruits approximately that required for vegetables.

From the majority of examples of representative shipments presented in the foregoing table it may be seen that, after deducting the cost of ice and all the incidental charges, there remains only a small amount for profit and hazard. The only commodity that seems to suffer a loss consistently is cantaloups, which are unusually perishable. If the items of haulage and switching, which are not expenses to the company since no payment is made to railroads for these services, were omitted from the incidental charges the net per car revenue allowed to profit and hazard would be materially increased.

The incidental charges as listed in the foregoing tables do not change. It is therefore reasonable to assume that the present

charges which were in effect ten years ago when cost of materials, labor, and supervision, was considerably less, yielded to the companies a substantial profit at that time. It is altogether reasonable to contend that the service of refrigeration should be permitted at a reasonable profit. It appears unreasonable, however, that arbitrary and apparently obsolete devices should be continued as bases for fixing the rate. It seems even more unnecessary in view of the fact that the car company collecting the charge in full does not prorate any part of it to the carrier for the particular service rendered by the carrier, charge for which is included in the rate. Studies have recently been made by some of the well organized refrigerator car companies for the purpose of making accurate analysis of the items entering into the cost of the service. It seems reasonable to suppose, therefore, that it would be altogether possible to ascertain the expense of each part of the service and allocate the various items so that each division of expense involved would be fully covered and in addition a reasonable amount provided to cover profit and hazard.

Stated charges not prorated.—The charges for refrigeration are collected by the railroad company for the interest of the car company, although sometimes the car company collects the charges direct. When a car under refrigeration moves from the lines of the parent railroad company, the company performing the icing receives only the customary price for the ice actually furnished. In official classification territory this charge has been generally $2.50 per ton. There are a few exceptions to this rate, but it is fairly representative for all territory east of the Mississippi and north of the Ohio and Potomac Rivers. On a shipment originating, therefore, on the lines of the Santa Fe in southern California destined for New York City the refrigeration will be handled by the Santa Fe Refrigerator Despatch Co. as far as Chicago. From Chicago to New York the refrigeration may be performed by the Erie Railroad or any other line to New York City. The refrigerator car company collects the full amount of the refrigeration charge from California to New York City and pays the Erie Railroad only for the amount of ice furnished from Chicago to New York, which is based on $2.50 per ton. The same situation holds true for any movement from the West to the East over the lines of the Southern or Union Pacific, Frisco or Gould systems. The Fruit Growers Express Inc. receives the entire refrigeration charge on shipments from the Southeast destined for any point outside the territory served by its contract lines. For instance, on a shipment of perishables from Florida to New York the car company performs the refrigeration service as far as Potomac Yards, Va., and from there on the Pennsylvania Railroad, which continues the refrigeration service, receives only $2.50 per ton of ice furnished. According to this practice the carriers which furnish a considerable part of the refrigeration service are paid only for the amount of ice furnished. The car line, on the other hand, receives all that part of the rate made up of incidental charges allowed in addition to the cost of ice and also whatever profit may accrue.

Carrier's reasons for the stated charge.—Refrigeration charges throughout the entire United States are in process of revision at the present time by order of the Railroad Administration. The plan is to work out refrigeration charges that will be based on movement of perishables per car irrespective of the weight. These charges will be

published as one tariff for the entire United States. The stated charges per car will cover all perishable commodities that are charged on this basis to-day, and will exclude only fresh meats and packing-house products, which are to continue under the cost of ice basis, and dairy products. The reasons given by carriers for the continuance of stated charges in the shipment of perishables are the following:

1. Carriers should not be expected or required to sell ice as a commodity; they are obligated under their duty as a carrier to furnish a service, namely, refrigeration.

2. Unlimited responsibility rests on the carrier under the stated charge, and it is given full freedom to provide adequate and efficient refrigeration without having to follow shipping instructions and other restrictions specified by the shipper.

3. The stated charge promotes conservation by preventing waste.

4. Parity of rates and equality of service is insured between shippers and shipments.

5. A charge based on the cost of ice, salt, and labor, would not give the carrier sufficient compensation to cover various other expenses which go to make up the gross cost of furnishing refrigeration.

6. The stated charge is published and invariable. The shipper, therefore, knows in advance his total charges for transportation of his commodity to any market.[1]

Comparison of Florida and California rates.—Rates in the past have varied for every section of the United States except in those regions where competition equalized them. Formerly when Armour Car Lines operated over the Union and Southern Pacific lines and also over the southeastern lines, the rate for refrigeration from Florida to New York was $80, while on a car carrying similar products from California to New York the refrigeration was $67.50.[2] The length of haul from representative points in Florida such as Arcadia and Sanford to New York is 5 to 6 days, while a shipment from Los Angeles to New York requires anywhere from 12 to 16 days. The number of reicings from Florida to New York is approximately 4, while the number of reicings from Los Angeles to New York averages 10. The reason for such discrimination in rates against Florida was the fact that Armour had an exclusive monopoly on all business in Florida, whereas his car line that formerly operated from southern California had to compete with other lines.

The California rate just quoted applies only from certain concentration points from which there was competition. Rates covering a shipment from local points to these concentration points were at the same time excessively high. Testimony in the files of the Interstate Commerce Commission and also data from the investigations carried on by that Commission show that Armour Car Lines, of which the Fruit Growers Express Inc. is the successor, has always wherever possible secured exclusive contracts with the carriers over whose lines it operates. An important result of these contracts is the elimination of competition and the ability of the company to charge the highest rates that the traffic will bear. The rates in the Southeast have been changed only slightly since about the year 1905. At that time the charges were made as high as permissible and in all these

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[1] 50 I. C. C. 699.

[2] A table showing a comparison of refrigeration rates at this time for perishables moving from Florida and California is presented in the appendix as Exhibit 12.

years a considerable profit has been made from refrigeration. In 1917 the profit to the Fruit Growers Express, Inc., for refrigeration was approximately $500,000. The past season of 1918 was an unusual one, and the company reports that its efforts to protect the fruit movement from Georgia and South Carolina resulted in considerable loss. The loss, however, for the 1918 season would be greatly overbalanced by the profits of the preceding three years when the net gain ranged anywhere from $700,000 to $1,175,000, representing a profit on the average of 10 to 16.4 per cent on the investment.[1] (See pp. 116 to 118.) That rates may need to be revised is probable and yet increase of rates should be made only where absolutely essential and only after careful inquiry into the factors making up the costs. A stated charge must allow a reasonable amount for hazard and unusual circumstances. Figures representing operation for a number of preceding years are at the present time obtainable, and it is reasonable to suppose that the rates soon to be applied under the direction of the Railroad Administration will be representative of the average cost for this service of refrigeration.[2]

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[1] Computed by the commission from statements submitted by the F. G. E.
[2] A table showing the present and proposed rates for refrigerating perishables from Florida and California is presented as Exhibit 13.

EXHIBITS.

EXHIBIT 1.

SERVICE ACCORDED BEEF REFRIGERATOR CARS OF INDEPENDENT PACKING COMPANIES.

JACOB E. DECKER & SONS.
Mason City, Iowa, April 23, 1918.

Subject: Federal Trade Commission Food Investigation Special Report Schedule 3, No. 4111.

FEDERAL TRADE COMMISSION, *Chicago, Ill.*

GENTLEMEN: Attached hereto you will find a list of specific instances of misuse of our equipment by the carriers. The instances referred to cover only a recent period.

In connection with the misuse of equipment we also attach hereto several telegrams showing that the carriers expect the owner of the equipment to pay for answers to telegrams tracing the equipment that has been misused. This means that in addition to the inconvenience suffered thru misuse of equipment, the shipper is put to the expense of tracing his cars by telegrams and carriers will not even bear their share by answering the telegrams paid, which is very unfair to car owners. In cases of misuse the carriers to be fair to the car owners should pay for the telegraph tracers both ways.

The cars this company own are equipped for handling dressed beef and fresh meat, while merchandise and perishable products commonly hauled in the railroad companies' provision cars can be handled in these dressed beef or fresh meat cars, fresh meat can not safely be handled in merchandise cars or the railroads' refrigerator cars, therefore, if a packer's dressed beef cars are not returned to him he can not move his fresh meat as a railroad owned car can not be substituted. A packer does not own his cars simply for the reason that he desires to own the equipment that he uses, but he is forced to it as the carriers will not furnish him cars of the kind necessary to transport dressed beef and fresh meat. In addition to furnishing cars for his own use, a packer is required to furnish approximately 25 per cent more than his actual needs, due to the fact that the carriers have this number of cars in their service that are the property of the packer, which represents a loss to the shipper. * * *[1]

Yours truly,

JACOB E. DECKER & SONS,
[Signed] By R. L. ELLIS,
Traffic Department.

INSTANCES OF MISHANDLING JACOB E. DECKER & SONS' EQUIPMENT.

DMRL 2410 shipped to Brooklyn, N. Y., 12-22-18, via M. & St. L.-C. & N. W.-I. H. B.-N. Y. C. Returned to C. & N. W. empty. C. & N. W. sent to G. B. & W. Ry. Co. C. B. & W. loaded with potatoes for Camp Gordon.

DMRL 2412 shipped to Detroit, Mich., 2-9-18, via M. & St. L.-C. & N. W.-I. H. B.-M. C. Returned to C. & N. W. empty. C. & N. W. loaded to C., St. P., M. & O. C., St. P., M. & O. loaded back to the C. & N. W. C. & N. W. delivered to E., J. & E. Up to date car has not been returned to us.

DME 2302 shipped to Davenport, Iowa, Jan. 12, 1918, via M. & St. L.-C., R. I. & P. Car was loaded on the C., R. I. & P. and up to this date (Apr. 22, 1918) car has not been returned to our service.

DME 2305 last loaded out of Mason City on the C. & N. W. C. & N. W. delivered to G. N. 2-22-18. G. N. loaded to C., B. & Q. point. C., B. & Q. loaded to Baltimore, up to date (Apr. 22, 1918) car has not been returned to us.

DME 2300 last reported I. H. B. to Mich. Cent., January 22, 1918. No record since.

DME 2309 last reported Wiggins Ferry to Mo. Pac. Ry., 2-2-18. This car has not been in Mason City for nearly six months.

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[1]All matters not pertaining to car operation have been omitted.

DME 2310 last reported M. & St. L. to Ill. Cent., February 27, 1918. Car destined Chicago, Ill., loaded on Ill. Cent. and has not been returned to Mason City to date (Apr. 22, 1918).

DME 2315 last reported B. & M. to N. Y. C., 2-25-18. Car has not been returned to Mason City to date (Apr. 22, 1918).

DME 2316 last reported N. Y. C. & St. L. to N. Y. C., January 29, 1918. Car has not been returned to Mason City to date (Apr. 22, 1918).

DME 2317 last reported Wiggins Ferry to Mo. Pac. Ry., 2-15-18. Car has not been returned to Mason City to date (Apr. 22, 1918).

DMRL 2406 shipped to Birmingham, Ala., 3-7-18, via M. & St. L.-Wab.-L. & N. Returned to Wabash empty, April 9. Not returned to Mason City to April 22, 1918.

DMRL 2413 shipped to Philadelphia, Pa., 3-6-18; via M. & St. L.-C., G. W.-I. H. B.-N. Y. C.-P. & R. The N. Y. C. delivered car empty to Chicago Junction (4-3-18), instead of returning to I. H. B. for home route. Car has not been returned to Mason City up to date (Apr. 22, 1918).

DMRL 2403 delivered to B. & A. for Boston on 4-9. Not returned to N. Y. C. up to April 22, 13 days already on B. & A. line.

DME 2319 shipped by us to Baltimore, Md., October 6, 1917. Routed M. & St. L.-C. & N. W.-I. H. B.-B. & O. Not returned to Mason City until April 19, 1918.

MORRELL REFRIGERATOR CAR CO.
(DISSOLVED).
T. HENRY FOSTER, TRUSTEE.

OPERATING
MORRELL REFRIGERATOR LINE,
MORRELL TANK LINE,
Ottumwa, Iowa, April 17, 1918.

Mr. W. H. REEVES,
Federal Trade Commission,
826 Federal Building, Chicago, Ill.

DEAR SIR: On your recent visit, you requested that we give you a list of our refrigerator cars which have been misused by the carriers. We have had so many cases of this kind during the past winter that we hardly feel it necessary to give you a full and complete list, but will give you a few of these cases, which will give the commission an idea as to the difficulties under which we have had to conduct our business during the past several months.

MRX 5438 shipped from Ottumwa, January 3, destined Albany, N. Y. Car should have been returned to Ottumwa, but was diverted to Kansas City by the Chicago & Alton Railroad where same was loaded by one of the packers at that market. Car was finally returned to Ottumwa during the early part of April.

MRX 5226 shipped December 17, Rock Island care M. & St. L. to Marshalltown, Iowa, this being one of our peddler car runs. Car loaded by some shipper, either on the M. & St. L. or C. & N. W. (we have not been able to learn definitely). The next information we have on car shows it was loaded at South Omaha, January 22, over the Rock Island with flour for New York City. After many requests and considerable expense, we succeeded in getting car back to Ottumwa the early part of April.

MRX 5125 billed out by us on January 18 to New York City via Pennsylvania Railroad. Car, instead of returning to Ottumwa, was set into the yards at Chicago, where it was loaded east by one of the Chicago packers. Returned to Ottumwa April 16.

MRX 5429 shipped January 3 to Troy, N. Y., via New York Central, was returned to Chicago, where same was loaded by one of the Chicago packers on February 23 for New York City. Car returned to Ottumwa April 15.

MRX 5302 loaded by us on December 1 at our Sioux Falls, S. Dak., plant, routed Illinois Central to Memphis, Tenn. Car was refused by the I. C. on return movement, reaching Sioux Falls empty on April 2. We are unable to get a full and complete record of the handling of this car while on the I. C., but understand it was under load a good part of the time.

MRX 5322. This car moved into Chicago over the C., B. & Q. empty, February 16. Was not forwarded until March 25. Are not at this time informed as to the cause for this detention in Chicago on the C., B. & Q.

MRX 5106 loaded by us on December 12 to New York via C., B. & Q., care of Erie. Car was diverted by the C. & A. to Kansas City, where it was loaded on February 25, to New York, routed C. & A., N. Y. C. Car has not yet been returned to us.

MRX 5115 loaded by us on December 12 to New York via C., B. & Q., Michigan Central, New York Central. Car was diverted on the return trip by the N. Y. C. to Kansas City, where it was loaded by some other packer on February 14. We are not at this time informed as to destination or routing of car nor who loaded it. Car has not yet returned to Ottumwa.

MRX 5205 loaded by us on November 6, destined New York via Erie. We have been trying for several months to get a line on this car, but thus far can get no definite information. Our last advice would indicate that it is somewhere in the Chicago district. Car has not yet reached our plant.

MRX 5209 loaded by us on December 22 via C., B. & Q., Illinois Central to Memphis, Tenn. Our last advice shows the Illinois Central allowed car to be reloaded and it is somewhere down in the Southeast at this time. We are trying to arrange for return to Ottumwa.

MRX 5227 loaded by us on November 20 via Rock Island, M. & St. L. to Marshalltown, being our regular peddler car run. Car delivered the C. & N. W., who have permitted same to be loaded on their line. Our record shows that it was loaded by one of the packers at South Omaha on December 28 for New York City. We have had up with the C. & N. W. on several occasions asking that car be put in line for return to us, but they repeatedly ignore our request. Our last record shows the C. & N. W. delivered to the E., J. & E. at Waukegan on March 31.

MRX 5229 loaded by us on November 22 routed C. & N. W., Erie to New York City. The C. & N. W. instead of returning to our Sioux Falls, S. Dak., plant, where it was originally loaded, delivered same to one of the packers at Sioux City, who loaded same on or about February 10 to some eastern destination. We are not at this time advised of full details.

MRX 5311 loaded by us on October 3 to Chicago via C., R. I. & P. This company misused car. Our last record shows delivered to the Missouri Pacific at Topeka, Kans., on March 15. This car, since leaving our plant in October, has been all over the South and West, having been loaded at St. Louis on November 18 for some point on the Southern Railway. Our next advice indicates car returned to the Missouri Pacific at St. Louis destined to some point on the D. & R. G. We regret to state that car has not yet been returned to us.

MRX 5435 loaded by us to Philadelphia on December 22, routing same, Nickel Plate, Lehigh Valley, P. & R. Car has been on hand in the shops of the Lehigh Valley at Packerton awaiting repairs since some time the first week of January. We had up with the Lehigh Valley on several occasions, who have assured us that they will hurry repairs and get it started back to Ottumwa, but thus far there has been nothing done.

MRX 5439 loaded by us on November 23, destined New Haven, Conn. Car loaded by some one at Chicago on February 1 for some eastern destination. We are unable to give any further particulars. Car has not been returned to us as yet.

MRX 5541 left Ottumwa January 4, routed New York Central to Utica, N. Y. Car, instead of returning to us as it should, was delivered to one of the packers in Chicago, who loaded same to Boston, one of our employees finding it in the Boston yards, who found on investigation that it was for one of our competitors at that market. He took up with them and asked that they unload immediately and return to us. Instead of handling in this manner, however, they reloaded same to Augusta, Me. We are unable to tell you the present location of car.

MRX 5601 loaded by us on November 22 to Birmingham, Ala., routed C., M. & St. P., Wabash, L. & N. Car has been mishandled by a number of lines in the Southeast, it having been on the lines of the Southern Railway, Big Four, and others. Our last record shows that it was loaded at Kansas City some time the first week of March with eggs for Philadlephia. Reconsigned from Philadelphia to Boston. Our last record shows the Central of N. J. delivering same to the N. Y., N. H. & H. on March 23.

MRX 5681 loaded by our company at Sioux Falls, S. Dak., on December 20, routing C. & N. W., Erie to New York. Car diverted on return trip, our records showing it on the lines of the Nickel Plate February 14. We asked the N. Y. C. to accept and deliver same to the C., B. & Q. for return to Ottumwa. Our next record shows same on hand at South Omaha, where it was loaded by one of the Chicago packers to Chicago. We are still after the car in an effort to get it back to our service.

MRX 5682. This car left Ottumwa August 25, routed Nickel Plate, D., L. & W. to Philadelphia. Our next record shows the B. & O. delivered same to the Washington Southern at Potomac yards, under load, September 15. The next record we get of this car shows it on hand at Chicago on the line of the Soo Line. We wired that company to deliver same to the C., B. & Q. for return to Ottumwa. Car is still on the lines of the Soo Line, they ignoring our requests for return of same to some line that can haul to Ottumwa.

MRX 5623. This car left Ottumwa July 23, routed Wabash, L. & N. to Birmingham, Ala. Car was used for a switch movement at East St. Louis from July 24 to August 17. Our next record shows that it was loaded in St. Louis by some one for some point on the Western Pacific. Car returned from that trip, reaching Kansas City on December 18. We can only assume that it was loaded at Kansas City, as our next record shows on hand at Fort Dodge, Iowa, February 7. The next record shows loaded at U. S. yards, South Omaha, for some point in the East, having been misused by the Illinois Central. We are pleased to report that car returned to Ottumwa April 15. You will note this car was away from Ottumwa for nearly nine months.

We also attach hereto copy of letter received this a. m. from the T. M. Sinclair & Co. (Ltd.), Cedar Rapids, Iowa, which is self-explanatory.

We have sent numerous telegrams, written innumerable letters, and had personal conversations with railroad representatives; taken the matter up by letter, telegram, and personal interview with the Railroad Administration, U. S. Food Administration, all of whom have promised their assistance in this matter, but the fact remains that the railroads still persist in misusing our equipment, although we are positively denied the privilege of using other packers' privately owned refrigerator or tank cars without authority from the owner. We are not suggesting that the railroads are willfully discriminating against us in this matter, but the fact remains that our competitors have been permitted to use our equipment during the past winter while we have been short of cars on many occasions and the operation of our business interfered with to that extent.

Yours very truly,

[Signed] By T. H. FOSTER,
Trustee.

HWD/hs D

THE RATH PACKING COMPANY,
Waterloo, Iowa, June 27, 1918.

FEDERAL TRADE COMMISSION, *Washington, D. C.*

GENTLEMEN: * * * [1] Regarding our difficulties in the way of securing proper refrigerator cars in which to ship our products, we have considerable trouble not only in keeping a sufficient number of cars on hand for loading, but those which are furnished us are, as a rule, very dirty, in poor repair, and at times entirely unfit for our use.

The expense to us of cleaning and preparing refrigerator cars for shipment runs from $7 to $10 per car. This, of course, is exclusive of icing. The big packers have their own private cars, and keep them in good repair. We tried using private cars, renting them by the month, but found it was too expensive and very unsatisfactory, owing to our inability to secure their prompt return to us when empty.

Switching facilities to and from our plant to the various railroads in Waterloo have not always been satisfactory, due, we believe, in a great part to lack of cooperation among local railroad men, a condition which is hard to overcome.

Cars of live stock are sometimes allowed to lie on interchange tracks an unreasonable length of time before switching to our plant. This causes a big shrinkage in weight, which we are compelled to allow our shippers.

This trouble could now be overcome by placing all the railroad yards here under a central control, the switching service being governed from one office.

We trust this information will be of use to you. If there is anything further along this line you desire please advise us.

Yours truly,

THE RATH PACKING CO.,

CAH/cc [Signed] C. A. HEATH.

BIRMINGHAM PACKING COMPANY,
BEEF AND PORK PACKERS—COLD STORAGE,
Birmingham, Ala., October 27, 1917.

FEDERAL TRADE COMMISSION, *Washington, D. C.*

GENTLEMEN:

* * * * * * *

#2.[1] As to there being unfair practices on the part of some engaged in the meat-packing business, it may not be called exactly unfair, but there are conditions prevailing in the trade that seriously handicap the small independent packer. For

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[1] All matters not pertaining to car operation have been omitted.

instance in the matter of shipment of dressed beef, pigs, sheep, and lambs, products which are required to be hung from hooks attached to the roof of the car. The railroads take the position that they are not required to furnish refrigerator cars equipped with what are termed beef racks, and the burden of providing this class of equipment is on the packer, be he small or large. Consequently there are only two methods that can be adopted; that is, the small packer must buy his own refrigerator cars properly equipped or must lease from refrigerator line companies such equipment.

Speaking for ourselves, we tried to buy some cars last year, and in the first place the price was prohibitive. In the next place there was no reasonably prompt delivery to be had, so we leased some cars at a very high monthly rental per car for the purpose of transporting dressed pigs, beef, and mutton. We had to lease on monthly basis, as the companies would not lease us on a mileage basis at this time on account of the slow return of the equipment. The earnings of the cars on a mileage basis are three-fourths of a cent a mile going and returning. This is probably sufficient compensation, provided the cars were returned in any reasonable length of time, but in our case our leased cars went forward on a journey taking five or six days, were unloaded immediately on arrival and were detained and used by the railroad companies, so that some of the cars were not returned to us under two months. The average for the return journey was at least six weeks, when two weeks would have been reasonable; that is twice as long to return empty as they would take to go forward, loaded.

This puts the small packer in position that he must pay an exorbitant rental for cars and that he must lease two or three times as many cars as he would need in the ordinary course of business. Relief from the slow return movement of the cars seems not to be had as there are no laws, as far as we know, that can compel the railroad companies to return the cars in a reasonable time, nor to prevail upon them not to use them for their own business.

From indirect information we have, the large packers get prompt return movement of cars and also are free from the disadvantages of having the railroads use their cars by exerting pressure over the railroad companies that they will not ship any cars over any railroad line that will not return their empty cars promptly. This demand on the small packer seems to be of no avail. We think definite regulations should provide for return or detention or use of private owned cars and not allow the carriers to use their own pleasure in this matter. We think this matter of cars and service is the most serious handicap that the small independent packers labor under, and to a very large extent keeps him out of interstate business.

In our opinion if the smaller packers were in better position to ship dressed meats to the eastern seaboard with greater facility, it would have a tendency to reduce the price of meat there; and, furthermore, would encourage the production of cattle, hogs, and sheep in the Southeastern States very materially if there was a broader market for the producers live stock in these several States, which would naturally occur if the meat-packing industry in the South could expand as would be natural, providing it were not handicapped by the inferior railroad service and arbitrary matters of obtaining refrigerators for shipping dressed meat.

Out of six cars of meat shipped this month to our branch in New York City each and every car was delayed from two to four days, and damage has resulted on account of the partial spoilage of the meat. Necessarily all food products that is spoiled wholly or in part curtails the supply to that extent and has a tendency to raise the price.

*   *   *   *   *   *   *

Yours truly,

BIRMINGHAM PACKING COMPANY,
CHU. ML. [Signed] By C. H. UNGERMAN, *Pres.*

IOWA PACKING CO.,
Des Moines, Iowa, April 15, 1918.

FEDERAL TRADE COMMISSION, *Chicago, Ill.*
Attention, Mr. Reeves.

GENTLEMEN: This has reference to our peddler and meat cars which we were talking about when you were here, the way they have been handled by the different carriers. The following cars leased by us and billed to Des Moines for our use over the Rock Island have to date not shown up at our plant available for our loading.

NYDX 3401 ordered by the Missouri River Despatch people, Chicago to Grand Trunk, to be turned over to Rock Island carded Des Moines, Iowa, for our service February 14; car not here yet.

NYD 3404 and 3410 turned over to the Rock Island, Chicago, on February 7; not here yet for our service.

NYDX 3621 carded to us over the C. N. W. about February 14; not here yet; 3622 which was carded same route to us arrived March 15.

NYDX 3639 carded to us over Rock Island; February 6 date delivered to them in Chicago; this car never arrived at our plant until April 1 or 2, for our service, almost 60 days. We are charged with a rental of $1.16¾ cents per day on this car, or for 22 days in February and 31 days in March; this car costing us better than $60, and the car never sent to our plant once.

A tracer put out by the Missouri River Despatch people in letter to us dated March 25 shows this car 3639 at Chicago on Rock Island March 16.

A tracer on NYDX 3410 in March we are advised in above letter was delivered by the Burlington to Great Northern at Minneapolis Junction March 17.

NYDX 3404 delivered by R. I. to N. Y. C. at Chicago March 15.

NYDX 3401 Grand Trunk Port Huron westbound March 23.

NYDX 3428 loaded to Burlington, Iowa, over C. B. Q., fresh meats, March 5, car boarded on each side return to Iowa Packing Co., Des Moines; in spite of this the above tracer shows this car billed Omaha to New York, March 22. Never came back to our plant.

NYDX 3438 loaded to Davenport, Iowa, R. I., by us with fresh meats March 4; the above tracer shows this car delivered to N. Y. C. lines, Chicago, March 17, never having returned to our plant after being loaded to Davenport, although boarded on both sides to us at Des Moines.

NYDX 3442 loaded by us to Minneapolis with fresh meats on March 9; the tracer letter sent us March 25 shows this car on the Penn. R. R. March 21. Car not returning to our plant, and at the present writing still out somewhere.

We find NYDX 3635 loaded by us to Cedar Rapids, Iowa, over Northwestern line, and tracer referred to shows this car at St. Johns Park, to Utica, N. Y., under load, and our rental bill on this car is better than $70; while we had the use of the car to Cedar Rapids only from here, the carrier allowing other use of it to be made after reaching Cedar Rapids. Car still out.

This will give you a very good idea of how our leased equipment is handled by the different lines, and while there are several other delays and mishandling, the ones referred to in this letter are some of the worst.

It proves an expensive proposition to us, when we receive a car about a month after it is billed or turned over to the carrier at Chicago, then get one load in it to some point and have the car out another sixty days perhaps before we get it back available for our service.

We are certainly entitled to a better handling of our equipment when empty than we have been getting by far, as we are giving the different lines a lot of business in and out of this city, with the business increasing daily almost.

If there is any way whereby the commission can or sees fit to give us their much-needed assistance in this matter, we surely will appreciate it very much.

Yours truly,

IOWA PACKING CO.,

———— ————,

Traffic Department.[1]

BRENNAN PACKING CO.

Union Stock Yards, Chicago, March 30, 1918.

Answering specifically items 11–C and 13.

FEDERAL TRADE COMMISSION, *Washington, D. C.:*

Your letter of March 4, inclosing blanks for report in regard to the operations of privately owned freight cars, was duly received. We are returning the same to you herewith filled out in so far as we have been able, but would call your attention to the fact that our only connection with affairs of this kind was as through lease of some refrigerator cars, as shown by the copy of that lease which we have included herewith.

You will notice that these cars were leased on a per diem basis, less whatever mileage earnings the cars might make on any trips when loaded out by us. While the original rate was 75 cents per day, by mutual agreement it was later changed to 90 cents per day, and still later changed to $1 per day.

You have asked for our views of the matter in general, or for any specific information which we can give that would throw light on this subject. May we say, briefly, that the small packer, as a food distributor, is face to face with a very serious problem under present conditions as regards the use and operation of refrigerator cars.

The railroads apparently are unable to furnish refrigerator equipment, and the private car lines are at the mercy of the carriers, especially as regards the return of the

[1] Letter unsigned, written by A. R. Pendarvis, traffic manager.

empties after the initial trip has been completed. Without any knowledge of how promptly these cars may be returned, the small packer is unable to figure the cost on sales which he may make.

For example, we shipped some time ago some goods to Brunswick, Ga., for export from that port. Before loading the goods here at Chicago, we took the matter up with the Illinois Central Railroad and they agreed, if given the business, to take steps to see that the empty cars were returned to us promptly after unloading. We then proceeded to forward these goods by their line, and in spite of the agreement thus entered into, cars were diverted on their home route; and, in one case at least, being sent to St. Louis and used in switching service between St. Louis and East St. Louis for a very considerable period.

Service of this kind, as you know, does not bring any mileage return, and in the case of MRD-1623, car did not again reach our service for 63 days. MRD-2544, also leased by us, was out 42 days; PRL-5203 was out 73 days, etc.

In order to make a test case, we rendered them bill for service at $1 per day on car MRD-1623. We have had a *very* considerable amount of correspondence with them regarding this claim, but they have so far steadfastly refused to honor it, saying that they had no tariff to cover. We suppose they would be equally justified in refusing payment for damages for death or injury to a passenger, or loss or injury to freight shipments through lack of tariff.

It seems to us, therefore, that their excuse is not justifiable, and that we should be allowed reimbursement, for they admit in their letters the mishandling of these cars, and yet they deny redress to us, even in spite of that admission. We think you will agree that a charge of from $60 to $80 for car service over and above all tariff charges for freight, icing, etc., is a very serious handicap to a small shipper. We understand that in some cases carriers have given redress to shippers for loss sustained in this manner, but that has not been our experience.[1]

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Very truly yours,

BRENNAN PACKING CO.,

CEH—M [Signed] CHAS. E. HERRICK, *Secretary.*

EXHIBIT 2.

EXPERIENCE OF TERRY PACKING CO.

The following letter presents the history of 10 private refrigerator cars operated over the lines of the Atlantic Coast Line Railroad:

TERRY PACKING COMPANY,
Columbia, S. C., March 19, 1918.

The FEDERAL TRADE COMMISSION,
Washington, D. C.
Mr. L. L. BRACKEN, *Secretary.*

DEAR SIR: In response to your letter of March 4 and Mr. F. W. Breimier's letter of March 16, I am inclosing special report No. 4149 with the first 10 pages filled in to the best of my ability.

Complying with your request, I am submitting you my statement of facts gathered by me while operating refrigerator cars. We operate quite an extensive wholesale fish business with producing branches in Florida and distributing houses at Charleston, S. C., Columbia, S. C., Savannah, Ga., and Augusta, Ga.

Our principal producing places are located on the A. C. L. Railway. During the fall of 1912 the railroads hauled our fish in dilapidated and wornout box cars, causing us to lose a great many fish by becoming flyblown and spoiling in transit, though not delayed.

Our fish are packed in bulk and iced with crushed ice in between the fish in the body of the car. We took the matter up with the A. C. L. and they claimed they had no refrigerator cars of their own and that the other refrigerator car owners, such as

[1] All matters not pertaining to car operation have been omitted.

Armour, who were operating refrigerator cars over their line, would not allow their cars to be used to transport fish in. We then decided for our own protection in order to receive our fish in good, fresh condition to buy some refrigerator cars, and in the spring of 1913, through the kindness of Mr. S. A. Stockard, car accountant of the A. C. L. at Wilmington, N. C., we bought 10 refrigerator cars from the Refrigerator Transit Co., of Chicago. We afterwards found out that these refrigerator cars were sold to us by the Swift Refrigerator Co., and we made final settlement for these cars with the Swift Refrigerator Co.

These cars were put in commission and turned over to the A. C. L. in the spring of 1913 for the sole purpose of bringing our fish from Punta Gorda, Fla., an A. C. L. point, to our distributing branches. We had no special agreement regarding these cars, but they were sold to us guaranteed in good condition and according to M. C. B. rules, and it was understood the railroads were to pay us three-fourths cent per mile moving over their lines loaded or empty. They were supposed to come to us loaded with fish from Punta Gorda, Fla., and returned immediately empty. We were to pay all necessary expenses to the railroad for making repairs to these cars, which we did.

These cars gave perfect satisfaction to us and apparently to the A. C. L. Railway during the year 1913, as they made no complaint. One of our cars early in 1914 was sent from Punta Gorda, Fla., to some western point—Chicago or St. Louis—loaded with fish and the icing expense on this car was so much less than on the cars of other refrigerator companies that it caused a disturbance of some kind. In the spring of 1914 an embargo was placed on our cars by the A. C. L. Railway and they would not haul them, claiming the cars were too small, etc.

After considerable argument, and with the help of the Swift Refrigerator Co., we proved to the A. C. L. Railway that they were handling the same size and kind of cars for Armour and other people and the embargo was raised and our cars were again put in commission.

From that time on our repair bills were larger than the revenue. As per itemized statement inclosed, according to paragraph 21, schedule F, on page 8, our repair bills for 1913 were $46.86—our mileage paid to us was $500.07. In 1914 our repair bills were $777.24, our mileage received was $590.57. In 1915 our repair bills were $507.93, our mileage $538.67. In 1916 our repair bills were $179.36, our mileage amounted to $179.36. In 1917 our repair bills were $19.26 and mileage $30.40.

We bought these cars in 1913. In 1915 three of them were destroyed on the A. C. L. track at Punta Gordo, Fla., by fire. In 1916 the A. C. L. Railway reported that six of them needed such extensive and expensive repairs that we ordered these six scrapped, and they were scrapped and the scrap value paid to us in 1916 by the A. C. L. In 1917 our last remaining car was also condemned by the A. C. L. and we ordered it scrapped, so this wound up and ended the life of our 10 refrigerator cars bought from the Swift Refrigerator Co. in 1913.

But our buying and putting into operation these 10 refrigerator cars in 1913 accomplished one purpose, for since 1914 we have had no trouble to get all refrigerator cars furnished us by the A. C. L. to haul our fish, so, as the railroad now furnishes us with refrigerator cars, we have no reason to own any ourselves.

I was told that all of our trouble arose through the Armour Refrigerator Co., who had some sort of a contract with the A. C. L. by which no refrigerator car could be loaded on the A. C. L. except an Armour car. This may or may not be true, but we do know that we had no complaint in 1913 and in 1914 an embargo was placed on our cars, and since then the repair bills were more than the mileage, and the fact is plain that while previous to 1914 we could not get refrigerator cars from the railroad for our business, but since 1914 we, as well as everyone else, are furnished refrigerator cars with proper equipment to handle our business.

We will be pleased to give you any other information that you want or that is in our power to give. You failed to inclose a franked envelope, so we are putting stamps on one.

Yours very respectfully,

TERRY PACKING CO.,
[Signed] F. G. TERRY, *President.*

Exhibit 3.

Shippers to whom Fruit Growers Express, Inc., leased cars during the year 1917.

Name and address of shipper.	Number car days.	Charge for each kind.	Total amount for each kind.
		Per day.	
Armour & Co., Chicago	740	$0.60	$444.00
Branch houses, Chicago	8,891	.75	6,668.25
Plants and departments:			
Armour Glue Works, Chicago	8	.75	6.00
Friedman Manufacturing Co., Chicago	5	1.00	5.00
Armour Soap Works, Chicago	10	.75	7.50
Do	80	.60	48.00
Anglo American Provision Co., Chicago	4	.60	2.40
Hammond Packing Co., South St. Joseph	6	.75	4.50
Armour Ammonia Works, Chicago	4	.60	2.40
	Number of cars.	*Per trip.*	
Andrews Bros., Pittsburgh	1	10.00	10.00
Smith Bros., Pittsburgh	2	10.00	20.00
G. W. Poland, Pittsburgh	1	10.00	10.00
F. Gordina, Pittsburgh	1	10.00	10.00
Troop Bros., Pittsburgh	1	10.00	10.00
W. J. Blackwood, Pittsburgh	1	10.00	10.00
L. G. Atmayer, Pittsburgh	2	10.00	20.00
A. S. Crary & Sons, Pittsburgh	1	10.00	10.00
J. J. Stanley, Pittsburgh	2	10.00	20.00
H. W. Kurtz, Pittsburgh	2	10.00	20.00
Kochler Provision Co., Pittsburgh	2	10.00	20.00
J. Wilmer, Pittsburgh	9	10.00	90.00
Gochning & Richards, Pittsburgh	6	10.00	60.00
Westmoreland & Co., Pittsburgh	4	10.00	40.00
Wilmer Provision Co., Pittsburgh	2	10.00	20.00
L. Gersci, Pittsburgh	1	10.00	10.00
J. R. Cole, Pittsburgh	8	10.00	80.00
I. Cohen, Pittsburgh	3	10.00	30.00
Free Bros., Pittsburgh	2	10.00	20.00
Chas. Haddad, Pittsburgh	1	10.00	10.00
R. Krasnow, Pittsburgh	1	10.00	10.00
I. C. Facer, Pittsburgh	1	10.00	10.00
Crutchfield & Woolfolk, Pittsburgh	4	10.00	40.00
Descalzi F. Co., Pittsburgh	2	10.00	20.00
Greensburg P. Co., Pittsburgh	3	10.00	30.00
M. Innseri, Pittsburgh	1	10.00	10.00
Jos. Flaherty, Pittsburgh	12	10.00	120.00
Walling & Co., Pittsburgh	1	10.00	10.00
C. Franzel, Pittsburgh	12	10.00	120.00
Iprecali & G. (Co.), Pittsburgh	2	10.00	20.00
F. Iprecali, Pittsburgh	1	10.00	10.00
L. Iiff, Pittsburgh	3	10.00	30.00
E. T. Clymonts, Pittsburgh	6	10.00	60.00
J. Sansone, Pittsburgh	1	10.00	10.00
Adams Provision Co., Pittsburgh	2	10.00	20.00
Iron City Provision Co., Pittsburgh	4	10.00	40.00
A. I. Craig, Pittsburgh	1	10.00	10.00
Tony Rubins, Pittsburgh	2	10.00	20.00
Monack Bros., Pittsburgh	5	10.00	50.00
Abe Schlitz, Pittsburgh	1	10.00	10.00
M. Sansone, Pittsburgh	5	10.00	50.00
J. Rodstein Provision Co., Pittsburgh	2	10.00	20.00
S. Catauzora, Pittsburgh	3	10.00	30.00
F. Leo, Pittsburgh	1	10.00	10.00
E. Monheim, Pittsburgh	1	10.00	10.00
Rutledge & Foy, Pittsburgh	1	10.00	10.00
Union Fruit Auction Co., Pittsburgh	1	10.00	10.00
R. P. Pieffer, Boston, Mass	1	10.00	10.00
Sachs Furber Co., Boston, Mass	1	10.00	10.00
Sweeney Lyons & Co., Boston, Mass	1	10.00	10.00
York & Whitney, Boston, Mass	1	10.00	10.00
Sawyer & Day, Boston, Mass	1	10.00	10.00
Leon Bros., Buffalo, N. Y	1	10.00	10.00
F. M. Leonard, Boston, Mass	2	10.00	20.00
Grand total			8,578.05

EXHIBIT 4.

COPY OF CONTRACT OF FRUIT GROWERS EXPRESS, INC., WITH A RAILROAD FOR FURNISHING REFRIGERATOR CARS.

This agreement, made and entered into this 11th day of September, 1917, by and between the Fruit Growers Express, Inc., a Delaware corporation, party of the first part, hereinafter referred to as the "Car Line," and the ———, party of the second part, hereinafter referred to as the "Railroad," Witnesseth:

That for and in consideration of the sum of one dollar ($1) by each of the parties hereto to the other in hand paid, the receipt whereof is hereby acknowledged, and in further consideration of the mutual covenants and agreements hereinafter set forth to be kept and performed by each of the parties hereto, it is hereby agreed as follows:

1. The Car Line shall furnish the Railroad at junction points or other points on its lines of railway, suitable refrigerator cars in such numbers and at such times as the business of the Railroad may require to enable it to accept with reasonable dispatch, and carry all the fruits and vegetables, except potatoes and tomatoes, which shippers may actually deliver to the Railroad at stations on its lines of railway in the State of ——— during the period from October 1st to July 1st of each year during the life of this contract for transportation in carloads, under refrigeration or ventilation, including those which may be precooled.

The Car Line, for the charge hereinafter mentioned to be paid to the Car Line by the Railroad, shall properly ice said cars moving under refrigeration initially and reice them at regular icing stations in transit between loading points and destination.

2. The Railroad shall use the Car Line's equipment exclusively in the movement of fruits and vegetables, in carloads, except potatoes and tomatoes, from points on the lines of railway owned or operated by the Railroad in the State of ———, including shipments originating in ——— which are handled to ——— for transfer into cars at that point.

3. The Railroad shall give the Car Line reasonable advance notice (not less than 30 days) in writing, revising same from time to time as conditions may warrant, of its requirements each season under this contract for the movement under refrigeration or ventilation, including pre-cooled shipments, specifying in such notice, as far as possible, the roads over which it prefers to receive such cars. It is also understood and agreed that at the same time the Railroad gives written notice to the Car Line of its requirements for cars, it shall also place written orders with each of its connections (sending the Car Line notice of same), conforming with said notice to the Car Line as far as each individual connection is concerned to the end that the roads which are to receive the loaded hauls for which these cars are intended shall willingly and promptly handle the empties.

The Railroad shall also, prior to the opening of each season, before September first, prepare a careful estimate of the number of cars of fruit and before November first a careful estimate of the number of cars of vegetables, except potatoes and tomatoes, for which equipment will be required during each month of the ensuing season for movement under ventilation, and will notify the Car Lines thereof. The purpose of the aforesaid notices is in order that the Car Line may have the necessary information in advance to enable it to furnish the equipment provided for in this contract, it being understood that in case of necessity cars available shall be used for the protection of shipments requiring refrigeration in preference to shipments not requiring such service.

4. The Railroad shall promptly deliver to such connections as may be designated by the Car Line any cars left over on the rails of the Railroad at the close of any fruit or vegetable season, and shall also make delivery of said cars to such connections at any time if, owing to unforeseen crop or other conditions, the cars furnished under this contract would be seriously delayed.

5. It is understood that cars furnished hereunder for movement under refrigeration and initially iced are to be loaded promptly and that this contract does not contemplate the furnishing of local cold storage at shipping point or destination. If cars placed for loading pursuant to shippers' orders are not released by shippers within twenty-four hours from the time of such placement, and on account of such delay ice therefor is desired, and ordered after placement of car at loading station, same will be furnished when convenient and practicable, in limited quantities only, upon reasonable advance notice from the Railroad, but the Car Line will not be responsible in any event for failure to keep such cars delayed in loading under ice at loading point and between loading point and first regular reicing station. It is also understood that the Car Line's service and responsibility under this contract ends upon arrival of cars at destination or destination train yard, and that it will not reice cars after arrival at such points. A charge of $5 per day or fraction thereof after the first 24 hours will be assessed

against each car not released within 24 hours from the time it is placed for loading pursuant to shipper's orders, which charge the Railroad shall pay to the Car Line.

6. The Railroad shall, without charge, promptly move the Car Line's cars to icing stations for initial icing and from initial icing stations to loading stations and to and from icing and reicing stations, and shall promptly perform all switching at such icing and reicing stations upon the lines of said Railroad as may be necessary to admit of the prompt icing and reicing of such cars, and shall also move promptly carload ice to initial icing and reicing stations, and in event of any failure on the part of the Railroad in this respect the Car Line shall be relieved from all responsibility for loss or damage resulting therefrom.

7. The Car Line shall hold itself accountable to the Railroad for any failure on its part to properly ice and reice, as aforesaid, such refrigerator cars furnished and supplied by it to the Railroad under this contract, and for any failure on its part to furnish as aforesaid a sufficient number of suitable cars for the transportation of fruits and vegetables to move under refrigeration in carloads from stations on the lines of said Railroad, subject to the provisions of paragraph 8 hereof with reference to shortage of cars. In case of recovery from the Railroad by legal process on any claim or claims for damages arising from the causes above mentioned, the Car Lines shall reimburse the Railroad and pay to it the amount so recovered from it for such damage: *Provided, however,* That the Car Line shall be afforded an opportunity, during the trial of any suit or action, to be heard in defense of its interests therein, and the Railroad and the Car Line shall co-operate in bringing to a favorable termination any such litigation: *And provided further,* That the Car Line shall not be precluded, by reason of any judgment entered against the Railroad in any such suit or action, or by reason of its participation therein, from showing subsequently thereto, in any proceeding between itself and the Railroad, that it did not cause the damage which resulted in such judgment.

8. The Car Line assumes no responsibility for injury or damage to the products shipped in said cars under ventilation, including precooled shipments, or for loss which may result from car shortage on the lines of the Railroad caused by reason of the failure of the Railroad's connections to promptly handle cars delivered to such connections for use by the various railroads in the movement of traffic requiring refrigerator cars, or in the event that the Car Line is prevented from furnishing the Railroad at junction points or other points on its line of railway sufficient cars to protect the movement of fruits and vegetables hereinbefore mentioned on account of failure of the Railroad's connections to carry out the Car Line's instructions with respect to the delivery of cars, and also on account of labor troubles, washouts, accidents or blockades on the lines of the Railroad, or on the lines of any railroad handling the Car Line's equipment.

9. The Railroad shall make no charge against the Car Line for movement of dry or iced refrigerator cars over its rails for protection of business covered by this contract, nor shall it make any charge for the movement of ice contained in the bunkers of such cars, but when ice is shipped in the bodies of such cars or in bodies of any other cars for the protection of cars in loading, the charge for the transportation of such ice shall be made on the basis of the regularly published carload freight rate per hundredweight or per ton for the actual weight of the ice shipped.

10. When pursuant to its orders, ice refrigerator cars are furnished the Railroad for placement at shipping point for loading and same are not loaded by the parties ordering the cars from the Railroad, the Railroad will be required to pay to the Car Line the cost of the ice wasted in such cars, regardless of whether it collects for same from parties ordering iced cars or not.

11. The Railroad hereby agrees not to allow the cars furnished under this contract while in the possession of the Railroad to be loaded with fish, ice or any other freight that would damage the insulation of cars, or in any way render them unfit for use in the handling of delicate fruits.

12. The Railroad as part of the consideration of this contract, shall furnish transportation over its lines of railway, when not in violation of laws governing same, for use of officers and agents of the Car Lines while actually engaged in the performance of the undertakings hereinabove assumed by the Car Line, and for the use of the officers, agents, attorneys and witnesses of the Car Line while engaged in the investigation of, or going to or returning from any trial of any suit or action brought to recover damages from any injury to any shipment moved in the equipment of the Car Line over the lines of the Railroad.

13. The Car Line's charges to the Railroad for initially icing and reicing said cars moving under refrigeration shall be the rates now shown in ——— Refrigeration Tariff No. 1, effective April 1, 1917, and Supplement No. 1 thereto, effective May 20, 1917, and Supplement No. 2, thereto, now in course of preparation, which will show

refrigeration rates from ——— to points in ———, ——— and ——— not now included in Refrigeration Tariff No. 1, or Supplement No. 1 thereto.

14. The Car Line is not to perform any service in connection with the preparation of the cars for loading, or the unloading from, or icing of, pre-cooled products except as hereafter provided, and when such shipments move through to destination without icing or reicing in transit the Car Line's charges to the Railroad, which the Railroad hereby agrees to pay to the Car Line, will be as follows: (*a*) $7.50 per car per trip for use of special equipment, including use of ice tanks; (*b*) $5 per car per trip for use of special equipment, not including use of ice tanks.

15. Whenever a car is placed at precooling plant under a switching rate the Railroad shall pay the Car Line $1 per car per day for each day's detention, or fraction thereof, at such precooling plant, including the day of placement at such plant, whether or not car is reiced in transit.

16. In the event the Railroad shall be requested at or prior to delivery to it for transportation to perform icing or reicing service on precooled citrus fruits, or vegetables, or whenever the shipper of precooled citrus fruits, or vegetables, shall fail to sign the release required by the Railroad, the Car Line, upon request from the Railroad, will ice cars containing said shipments at regular icing stations when placed at such stations by the Railroad, or its connections, for icing, and will charge the Railroad for such service, refrigeration charges shown in the tariffs referred to in paragraph 13 hereof: *Provided, however*, That the Car Line in so icing said cars shall not be responsible or liable for damage to such shipments that may be due to or caused by failure of the Railroad to give the Car Line such reasonable advance notice to have enabled it to furnish the Railroad for the shipper an iced car for the loading of such shipment.

17. In the event a precooled shipment is delivered to the Railroad ready for transportation, and, at the time of such delivery, is preiced to the full capacity of the car tanks, without expense to the Car Line, the Car Line will, at the request of the Railroad, reice said car at any or all regular icing stations en route after the car leaves the point of shipment, when placed at such stations by the Railroad, or its connections, for reicing, and will charge the Railroad for such service refrigeration charges shown in the tariffs referred to in paragraph 13 hereof, less $25 per car.

18. Whenever refrigeration charges are paid to the Car Line by the Railroad, as provided in paragraphs 16 and 17 above, the charges provided for in paragraph 14 (*a*) and 14 (*b*) shall not apply.

19. The Railroad shall and will, during the whole life of this contract, promptly pay to the Car Line as rental for the use of cars furnished hereunder, one cent (1¢) per car per mile run over the lines of the Railroad both loaded and empty; the Car Line to collect direct from connections the mileage earned by its cars beyond the rails of the Railroad.

20. The Railroad shall hold in trust for the Car Line and pay to it by the end of each month all moneys earned by it under this contract during the preceding month.

21. It is further understood and agreed that shipments of fruits and vegetables originating in ——— and placed under refrigeration in ——— or at ——— and vicinity thereof and destined via ——— to points in the United States, shall move under the supervision of the Car Line from ——— to destination at the refrigeration charges specified in this contract for the handling of business originating at ———, it being understood, however, that the Car Line shall not be required to pay for any ice used in icing such cars in ——— or assume any other expense incident to the handling of such shipments prior to their arrival at ———.

22. On February first of each year during the life of this contract the Railroad shall notify the Car Line of the estimated number of carloads of tomatoes which will originate during the ensuing season upon its lines of railway in ———, and the Car Line, promptly upon receipt of such notice, shall advise the Railroad of the number of refrigerator cars it will undertake to furnish for the handling of said tomatoes, it being the understanding of the parties hereto that, irrespective of said notice from the Car Line to the Railroad, the Car Line will endeavor to furnish sufficient refrigerator cars to handle said entire tomato movement, and the Railroad agrees to use the Car Line's cars in preference to all other cars, it being understood that the Railroad shall be at liberty to make other arrangements for such additional equipment for the handling of said tomato crop as the Car Line may be unable to furnish. The charges for the movement of any said tomatoes under refrigeration shall be the rates stated in the tariffs referred to in paragraph 13 hereof, and the mileage allowance on the said cars, whether handling shipments under ventilation or refrigeration, shall be one cent (1¢) per mile both loaded and empty, as hereinabove specified.

23. This contract cancels as of October 1, 1917, a certain contract between the Armour Car Lines and the ——— Company, dated February 16, 1910, with amendments thereto, which was assigned to the Fruit Growers Express Inc., party of the first

part herein. under date of November 5, 1914; and also contract between Armour Car Lines and the ——— Company, dated November 1, 1913, with amendments thereto, which was assigned to the said Fruit Growers Express, Inc., November 5, 1914, and also contract between the said Fruit Growers Express, Inc., and the ———, dated January 2, 1915, and shall inure to the benefit of and be binding upon the parties hereto and their respective successors and assigns for a period of five (5) years from and after October 1, 1917, and thereafter with the right in either party of terminating same after October 1, 1922, by giving eighteen (18) month's prior written notice to the other of its intention so to do, it being understood, however, that such notice will not be given by either party prior to October 1, 1922.

24. IN WITNESS WHEREOF, the parties hereto have caused these presents to be executed in duplicate by their duly authorized officers in this behalf, the day and year first above written.

FRUIT GROWERS EXPRESS, INC..
By F. W. ELLIS, *President*.
——— ——— RAILWAY CO..
By ——— ———, *Vice President*.

EXHIBIT 5.

Seven railroads in Southeast with which Fruit Growers Express, Inc., has exclusive contracts.

Name of railroad.	Owned or controlled by—
Atlantic Coast Line	
Seaboard Air Line	
Florida East Coast	
Aberdeen & Rockfish	Independent company, 60 miles of track.
Baltimore, Chesapeake & Atlantic	Pennsylvania R. R.
Charlotte Harbor & Northern	American Agricultural Chemical Co., 110 miles of track.
New York, Philadelphia & Norfolk	Pennsylvania R. R.

EXHIBIT 6.

Thirty-one railroads in Southeast and Middle West with which Fruit Growers Express, Inc., formerly had exclusive contracts.

Name of railroad.	Owned or controlled by—
Atlantic Coast Line	
Aberdeen & Rockfish	Independent company, 60 miles of track.
Alabama & Vicksburg	Alabama, New Orleans, Texas & Pacific Railways Co.
Atlanta, Birmingham & Atlantic	Independent company.
Baltimore, Chesapeake & Atlantic	Pennsylvania R. R.
Central of Georgia	Illinois Central.
Charlotte Harbor & Northern	American Agricultural Chemical Co., 110 miles of track.
Cleveland, Cincinnati, Chicago & St. Louis	New York Central.
Florida East Coast	
Gainesville Midland	Independent company, 74 miles of track.
Georgia, Florida & Alabama	Independent company, 192 miles of track.
Georgia Northern	Independent company, 68 miles of track.
Georgia Railroad	Atlantic Coast Line and Louisville & Nashville.
Georgia Southern & Florida	Southern Railway Co.
Hawkinsville & Florida Southern	Georgia Southern & Florida.
Macon & Birmingham	Independent company, 334 miles of track.
Macon, Dublin & Savannah	Seaboard Air Line.
Michigan Central	New York Central.
Mobile & Ohio	Southern Railway Co.
Nashville, Chattanooga & St. Louis	Louisville & Nashville.
New York, Philadelphia & Norfolk	Pennsylvania R. R.
New Orleans & Northeastern	Southern Railway Co.
Norfolk Southern	Independent company.
Richmond, Fredericksburg & Potomac	Richmond-Washington Co.; stock owned equally by P. R. R., A. C. L., Southern, S. A. L., C. & O., and B. & O.
Seaboard Air Line	
South Georgia	Independent company, 82 miles of track.
Tampa & Jacksonville	Independent company, 84 miles of track.
Tennessee, Alabama & Georgia	Independent company, 96 miles of track.
Vicksburg, Shreveport & Pacific	Alabama & Vicksburg.
Wadley Southern	Illinois Central.
Wrightsville & Tennille	Do.

EXHIBIT 7.

Tank-car rentals from private car companies.

Date of lease.		Consideration per month.	Number of cars.	Date of lease.		Consideration per month.	Number of cars.
From—	To—			From—	To—		
June 1, 1915	June 1, 1915	$25.00	35	Nov. 1, 1916	Nov. 1, 1918	$30.00	18
June 8, 1915	6 months	27.50	2	Jan. 1, 1917	Jan. 1, 1920	30.00	5
Nov. 1, 1915	Nov. 1, 1916	25.00	18	Do	Dec. 1, 1917	65.00	2
Feb. 1, 1916	Feb. 1, 1917	25.00	22	Jan. 11, 1917	(2)	50.00	1
Mar. 1, 1916	Mar. 1, 1917	25.00	10	Jan. 30, 1917	Oct. 31, 1917	150.00	11
Mar. 29, 1916	July 29, 1916	30.00	6	Mar. 2, 1917	Aug. 31, 1917	125.00	10
Mar. 30, 1916	do	25.00	6	Apr. 2, 1917	Aug. 31, 1920	45.00	50
Do	Mar. 30, 1918	30.00	55	Apr. 20, 1917	3 years	50.00	3
Apr. 1, 1916	Apr. 1, 1918	20.00	20	May 4, 1917	Aug. 31, 1920	65.00	50
May 1, 1916	Mar. 31, 1918	25.00	15	June 1, 1917	May 30, 1919	65.00	16
June 30, 1916	Oct. 31, 1918	30.00	35	June 22, 1917	Aug. 31, 1919	65.00	49
Sept. 18, 1916	(1)	30.00	5	Aug. 20, 1917	Oct. 10, 1920	100.00	10
Oct. 5, 1916	Oct. 31, 1918	30.00	15	Oct. 1, 1917	3 years	45.00	5
Oct. 15, 1916	6 months	45.00	5	Oct. 17, 1917	Oct. 31, 1920	80.00	13
Oct. 31, 1916	Oct. 31, 1917	40.00	5				

[1] 3 years from delivery. [2] 1 year from delivery.

EXHIBIT 8.

Refrigerator-car rentals from private car companies.

Date of lease.		Consideration per month.	Number of cars.	Date of lease.		Consideration per month.	Number of cars.
From—	To—			From—	To —		
Jan. 23, 1914	Jan. 23, 1917	$15.00	200	Oct. 28, 1915	Oct. 28, 1918	Free.	30
Feb. 15, 1914	Feb. 15, 1915	16.50	20	Jan. 10, 1916	Apr. 20, 1916	$25.00	1
Apr. 6, 1914	Apr. 6, 1917	14.00	50	Mar. 1, 1916	Mar. 1, 1921	20.00	150
May 1, 1914	May 1, 1917	Free.	50	Apr. 29, 1916	1 year from delivery.	15.00	20
June 1, 1914	June 1, 1917	Free.	10				
Aug. 10, 1914	Aug. 10, 1917	Free.	25	May 15, 1916	May 15, 1917	35.00	13
Sept. 12, 1914	Apr. 15, 1915	20.00	100	May 23, 1916	May 23, 1918	Free.	50
Dec. 1, 1914	Dec. 1, 1915	22.50	8	May 31, 1916	May 31, 1919	Free.	100
Jan. 14, 1915	Jan. 14, 1918	Free.	20	Do	Dec. 31, 1916	25.00	100
Jan. 20, 1915	Jan. 20, 1918	Free.	100-200	June 5, 1916	June 5, 1919	Free.	100
Feb. 24, 1915	Feb. 24, 1918	Free.	20	Aug. 29, 1916	1 year from delivery.	15.00	5
Feb. 27, 1915	Feb. 27, 1918	Free.	20				
Do	do	Free.	75	Sept. 12, 1916	Sept. 12, 1917	Free.	150
Mar. 1, 1915	Mar. 1, 1918	Free.	15	Sept. 23, 1916	6 months	27.50	10
Do	do	Free.	100	Oct. 11, 1916	Mar. 15, 1917	25.00	2
Do	do	Free.	75	Nov. 23, 1916	Feb. 1, 1918	27.50	25
Apr. 1, 1915	Apr. 1, 1918	Free.	30	Mar. 31, 1917	6 months	20.00	15
Do	do	Free.	25	May 1, 1917	May 1, 1920	22.50	600
July 29, 1915	Nov. 1, 1917	12.50	100	May 12, 1917	6 months from delivery.	25.00	5
Aug. 1, 1915	3 years	16.00	100				
Aug. 2, 1915	Aug. 2, 1918	Free.	50	June 5, 1917	6 months	25.00	2-3
Do	do	Free.	15	June 8, 1917	June 8, 1920	22.50	75
Do	do	Free.	10	June 9, 1917	June 9, 1921	25.00	25
Do	do	Free.	10	June 30, 1917	June 30, 1918	30.00	1
Do	do	Free.	25	July 3, 1917	Nov. 1, 1920	15.00	600
Do	do	Free.	35	Oct. 1, 1917	Indefinitely	32.50	25
Aug. 16, 1915	Aug. 16, 1921	Free.	500	Do	June 1, 1918	30.00	10
Oct. 14, 1915	Oct. 14, 1918	Free.	25				

EXHIBIT 9.

REPRESENTATIVE LEASE OF CARS BY PRIVATE CAR COMPANY TO SHIPPER.

Articles of agreement, made and entered into this 23rd day of September, 1916, by and between the ———, party of the first part, and ———, party of the second part.

Witnesseth: That for and in consideration of the several covenants and agreements hereinafter contained, to be kept and performed by the respective parties hereto, and in further consideration of the fact the party of the first part will, in pursuance hereof, expend large sums of money in equipping the cars for the protection of the property

of the said second party and in further consideration of the fact that the business of the said party of the second part, will, under this agreement, be more efficiently transacted and the transportation of its products secured with greater safety and dispatch, it is stipulated and agreed by and between the parties hereto as follows, to wit:

First: The ———, party of the first part hereby agrees to provide ten (10) refrigerator cars equipped with beef rails and brine tanks for the use of the said party of the second part, and to place same at the disposal of the said second party, the cars to bear the name of said second party on each side opposite the corporation name of the first party as per stencil to be furnished by the party of the second part. Said cars to be suitable for the transportation of dressed beef, to be newly painted and lettered, for which the party of the second part agree to pay twelve dollars and fifty cents ($12.50) per car.

Second: The said cars are to be kept in good running condition and repair, by the said party of the first part, and the party of the second part guarantees to the first party, that said cars shall earn mileage from the railroads over which same are routed from time to time equal to twenty-seven dollars and fifty cents ($27.50) per car, per month, during the pendency of this agreement. The party of the first part will keep accurate account of the mileage earned and reported to it by the various railroads using them, and report to the party of the second part the amount earned by the said cars, and if such mileage earnings do not amount to twenty-seven dollars and fifty cents ($27.50) per car, per month, the party of the first part will render bill for the difference, which the party of the second part agrees to pay within thirty days after presentation of same. If mileage should exceed twenty-seven dollars and fifty-cents ($27.50) per car, per month, such excess to be paid over by the party of the first part, to the party of the second part.

Third: The party of the first part will pay all repair bills to the railroad companies for the repairs to said cars, and the said second party will be at no expense whatever in the maintenance of same, excepting that the party of the second part agrees to take care of the padding about doors, and any other light repairs necessary for the ice bunkers in the interior cars when they should need light repairs.

Fourth: The party of the second part agrees to route the cars assigned them under this agreement through the Chicago Gateway when it is practicable to do so, to enable the party of the first part to take them into their shops for necessary repairs.

Fifth. The said party of the first part shall at all times give prompt attention and dispatch to the cars and business of the said party of the second part, and further obligates itself to maintain said cars at all times in good condition according to "Master Car Builders' Rules," and the said party of the second part agrees to take all proper and reasonable care of the said cars while in its possession, and to report daily to the said party of the first part the date, routing, and destination of all of the said cars at the time of shipment.

Sixth: This agreement shall be in force and effect between the parties hereto for six (6) months from average date of delivery of said cars and to continue thereafter until thirty (30) days' notice in writing has been given party of either part thereto of its desire to discontinue same. Delivery of cars to be made during the period from October 15, 1916, to November 15, 1916.

Seventh: The party of the first part agrees to deliver the cars thus assigned in this agreement at ———, without charge to the party of the second part, and in case of destruction by fire or otherwise of the plant of the party of the second part, this agreement will be canceled by a fifteen (15) day notice in writing of such destruction, by the party of the second part.

If any of the cars thus assigned should be destroyed or damaged so as to unfit them for further use, the party of the first part will substitute other cars in their stead, and if cars should be damaged and held on repair tracks of railroads on account of such damage for a period exceeding ten (10) days, rental on same will cease after the ten (10) days' period until such cars are returned to service or replaced at ———.

In witness whereof, the said parties have caused their signature to be affixed hereto the day and year first above written.

——— ———

By ——— ———, *President.*

——— ———.

By ——— ———.

EXHIBIT 10.

Railroads with which American Refrigerator Transit Co. formerly had contracts for carrying perishable freight.

Ann Arbor Railroad Co.
Arkansas Western Railway Co.
Baltimore & Ohio Southwestern Railroad Co.
Canadian Pacific Railway Co.
Cincinnati, Hamilton & Dayton Railway.
Chicago & Alton Railroad Co.
Colorado & Southern Railway Co.
Continental Line. Central States Dispatch. Fast freight lines of the Baltimore & Ohio Railroad Co.
Delaware, Lackawana & Western Railroad Co.
Denver & Rio Grande Railroad Co.
Denver, Laramie & Northwestern Railroad Co.
De Queen & Eastern Railroad Co.
Erie Railroad Co.
Illinois Traction System.
International & Great Northern Railway Co.
Kansas City Southern Railway Co.
Kansas City & Memphis Railway.
Lehigh Valley Despatch, fast freight line of the Lehigh Valley Railroad Co.
Louisiana & Northwest Railroad.
Louisiana & Arkansas Railway Co.
Memphis, Dallas & Gulf Railroad Co.
Minneapolis & St. Louis Railroad.
Missouri Pacific Railroad Co.
Missouri, Oklahoma & Gulf Railway Co.
Ogden, Logan & Idaho Railway Co.
Paris & Mount Pleasant Railroad Co.
Prescott & Northwestern Railroad Co.
San Antonio, Uvalde & Gulf Railroad Co.
St. Louis Southwestern Railway.
St. Louis, Iron Mountain & Southern Railway.
Southern Railway Co.
Texarkana & Fort Smith Railway.
Texas-Mexican Railway.
Texas & Pacific Railway.
Thornton & Alexandria Railway Co.
Tioga & Southeastern Railway Co.
Wabash Railway Co.
Wheeling & Lake Erie Railway Co.

Exhibit 11.

Cost of ice and selling price per ton delivered to the bunkers of refrigerator cars for years 1915–1918.

Name of company.	Location of ice plant.	Cost of production and selling price of ice.							
		1915		1916		1917		1918	
		Cost.	Price.	Cost.	Price.	Cost.	Price.	Cost.	Price.
Alachua Ice & Water Co.	Alachua, Fla.	$3.00	$3.50	$3.25	$3.50	$3.50	$3.50		
Southern Utilities Co.	Arcadia, Fort Lauderdale, Fort Myers, Lakeland, Live Oak, Miami, Okeechobee, Palatka, Pensacola, Punta Gorda, St. Augustine, Sanford, Tarpon Springs, Titusville, West Palm Beach, Fla., and Tifton, Ga.		3.60–5.45		3.57–5.48		3.52–5.93	$1.70–$5.00	$3.70–$6.53
Diamond Ice Co.	Gainsville, Fla.	3.00	3.50	3.25	3.50	3.50	3.50		3.50
Do.	High Springs, Fla.				3.75–4.50		3.75–5.00		3.75.5.00
Consumers Ice & Cold Storage Co.	Key West, Fla.		3.50–5.00		3.50–5.00	6.08	3.50–5.00		3.50–5.00
Ocala Ice & Packing Co.	Ocala, Fla.	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
Orlando Water & Light Co.	Orlando, Fla.		3.50–6.00		3.50–6.00	1.50	3.50–6.00		3.50–6.00
New Smyrna Public Service Co.	New Smyrna, Fla.	2.24	4.00	2.24	4.00–4.50	2.24	3.82–4.50		4.00
Citizens Ice & Cold Storage Co.	St. Petersburg, Fla.	2.55	3.50–6.00	2.55	3.50–6.00	2.55	3.50–6.00	2.55	3.50–6.00
Middle Florida Ice Co.	Tallahassee, Fla.		3.50		3.50	5.65	3.50		3.50
Wildwood Crate & Ice Co.	Wildwood, Fla.			2.57	3.50	2.57	3.50	2.57	3.50
Atlantic Ice & Coal Corporation.	Atlanta, Albany, Americus, Athens, Augusta, Columbus, Cordele, Covington, Dublin, Elberton, Fort Valley, Macon, Rome, Ga.; Jacksonville, Palmetto, Tampa, Fla.; Montgomery, Ala.; Chattanooga, Knoxville, and Nashville, Tenn.	.57–2.37	2.75–4.00	.85–2.55	3.25–3.50	.95–1.75	3.50	1.10–2.50	3.00–3.75
Camilla Ice & Cold Storage Co.	Camilla, Ga.	4.00	3.50	4.00	3.50	4.00	3.50		
Ice Delivery Co.	Savannah, Ga.		5.00		3.00		3.00–5.00		8.00
South Atlantic Packing & Provision Co.	do.	3.00	3.50–5.00	3.00	3.50–5.00	3.00	4.00–5.00		
Toccoa Ice & Coal Co.	Toccoa, Ga.	1.65	4.00	1.65	3.75		3.75	3.01	
Ware County Light & Power Co.	Waycross, Ga.	3.81	3.25–5.00	3.81	3.25–5.00	3.81	3.25–5.00	3.81	3.25–5.50

EXHIBIT 11—Continued.

Cost of ice and selling price per ton delivered to the bunkers of refrigerator cars for years 1915–1918—Continued.

Name of company.	Location of ice plant.	Cost of production and selling price of ice.							
		1915		1916		1917		1918	
		Cost.	Price.	Cost.	Price.	Cost.	Price.	Cost.	Price.
Carolina Public Service Co.	Bennetts-Charleston, Charleston, Columbia, Greenville, and Spartansburg, S. C.	$1.75–2.30	$3.50		$3.50		$3.50		$3.50
Storage Supply Co.	Asheville, N. C.	3.32	4.00	$3.32	4.00	$3.32	4.00	$3.32	4.00
Fayetteville Ice & Manufacturing Co.	Fayetteville, N. C.		3.25		3.25		3.25		3.75
Arctic Ice & Coal Co.	Greensboro, Winston-Salem, and High Point, N. C.	4.77–6.70	4.00	4.77–6.70	4.00	4.51–6.70	3.50–4.00	4.77–6.70	4.00
Johnson & Johnson Co.	Raleigh, N. C.	6.75	3.25	6.75	3.25	6.75	3.25	6.75	3.25
Independent Ice Co.	Wilmington and Chadbourn, N. C.		4.00		4.00		4.00		4.00
Mutual Ice Co.	Alexandria, Va.		2.85		2.85		2.70		2.70
McSweeney Ice Co.	Richmond, Va.					2.50	5.00	2.50	5.00
Mobile Brewery.	Mobile, Ala.	3.02	3.00	3.02	3.00				
Eagle Cotton Oil Co.	Meridian, Miss.	3.75	4.00–4.50		3.50–4.50		2.90–4.00		
Southern Cold Storage Co.	Cleveland, Tenn.		4.00		4.00	3.84	4.00		6.00
Beare Bros. Ice & Coal Co.	Jackson, Tenn.		3.25		3.25	3.61	3.25		4.50
Latonia Ice & Fuel Co.	Latonia, Ky.	2.65	3.25		3.25		3.25		4.25
Danville Ice & Coal Co.	Danville, Ky.	2.04	3.50–5.00	1.78	3.50–5.00	2.85	3.50–6.00		4.00–7.00
Boston Ice Co.	Boston, Mass.	1.00–5.00	3.50		3.50		4.00		4.00–6.00
Knickerbocker Ice Co.	New York City.		5.00		5.00		5.00	4.50–9.00	
American Ice Co.	Philadelphia, Pa.	1.55	2.50–4.00	1.55	3.00–5.00	1.55	3.70–8.00	2.68	4.50–7.00
Do.	Baltimore, Md.	.84–2.29	3.50–4.00	.84–2.29	3.50–4.00	.84–2.29	4.00–5.00		5.00–6.00
City Ice Delivery Co.	Cincinnati, Bernard, Lockland, and Norwood, Ohio; Covington, Newport, and Dayton, Ky.		3.15–4.00		3.00–4.00	1.41	3.00–4.00	2.41	3.50–5.00
Central Illinois Public Service Co.	Mounds, Anna, and Cairo, Ill.	1.35	3.40	1.27	3.00	1.97	3.00		4.00
Union Ice & Coal Co.	Silvis and Moline, Ill.	1.50–2.20	1.75–2.00		1.75–2.00		2.50		3.00
Holt & Brandon Ice & Cold Storage Co.	Evansville, Ind.	2.40	3.00–4.00		3.00–4.00		3.00–4.00		3.00–4.00
John Hilt Lake Ice Co.	Pine Lake, Ind.	.20	1.00	.20	1.00	.20	1.00	.30	1.20
Brown Ice & Coal Co.	Paw Paw Lake, St. Joseph, and Benton Harbor, Mich.	.37½	2.50	.66⅔	2.50	.43⅓	2.50		

Brown Ice & Coal Co.	Paw Paw Lake, ... and Benton Harbor, Mich.								
Consumers Ice Co.	Grand Rapids, Mich.		2.50		2.50	1.00	2.50		2.50
Paw Paw Ice Co.	Paw Paw, Mich.	.50	2.25		2.25		2.25		2.50
Cedar Lake Ice Co.	Minneapolis, Minn.	1.25	2.50		2.50		2.50		3.50
Miller Ice Co.	Mankato, Minn.	1.03	2.00	1.37	2.25	2.05	2.50		2.50
Peoples' Coal & Ice Co.	St. Paul, Minn.		1.00-2.50		1.00-3.00		1.00-3.50		1.00-3.75
The Railways Ice Co.	Memphis, Tenn.; Argentine, Kans.; Harvard, Ark.; Monett, Mo.; Waynoka, Woodward, and Shattuck, Okla.; and Clovis and Belen, N. Mex.		2.25-4.45		2.25-3.50	1.75-3.75	2.30-3.50		2.60-4.00
Hammond Bros. Ice & Cold Storage Co.	Springfield, Mo.		2.00-3.50		2.00-3.50		2.00-4.50		3.00-5.00
El Reno Ice Plant	El Reno, Okla.		3.50				2.20		2.20-3.90
Fort Smith Ice & Cold Storage Co.	Fort Smith, Ark.	2.86	3.50		3.50		2.90		4.00
Intermountain Railway, Light & Power Co.	La Junta and Las Animas, Colo.; Scottsbluff and Holdrege, Nebr.: Navasota and Bellville, Tex.					2.00-5.00	2.25-2.94		2.25-3.00

EXHIBIT 12.

This exhibit [1] is reproduced from I. C. C. Docket 1168. It was presented by Joshua C. Chase, of Chase & Co., Jacksonville, Fla., in the case of Florida Fruit & Vegetable Shippers' Association *v.* Atlantic Coast Line Railroad Co. et al.

Comparative statement showing mileage and refrigeration charges on citrus fruits and vegetables.

To—	From Los Angeles, Calif.				From Arcadia, Fla.			
	Miles.	Deciduous and melons (26,000).	Vegetables (24,000).	Oranges per car (minimum, 24,192).	Miles.	Oranges per car (citrus, 24,000).	Vegetables (20,000).	Pines (24,000).
Albany, N. Y	3,096	$82.50	$67.50	$65.61	1,420	$82.50	$80.00	$90.00
Buffalo, N. Y	2,800	80.00	65.00	63.43	1,545	82.50	80.00	90.00
Boston	3,298	85.00	70.00	78.71	1,513	82.50	80.00	90.00
Baltimore	3,023	82.50	57.50	65.61	1,093	67.50	80.00	90.00
Cincinnati	2,624	80.00	65.00	63.43	1,099	67.50	80.00	90.00
Chicago	2,265	70.00	55.00	54.67	1,404	75.00	80.00	90.00
Cleveland	2,622	80.00	65.00	63.43	1,362	75.00	80.00	90.00
Evansville, Ind	2,265	75.00	60.00	59.05	1,039	67.50	80.00	90.00
Kansas City, Mo	1,807	65.00	52.50	52.50	1,410	88.50	88.00	99.00
Louisville, Ky	2,264	80.00	65.00	63.43	1,069	67.50	80.00	90.00
Milwaukee	2,350	70.00	55.00	63.43	1,489	83.50	80.00	90.00
Minneapolis	2,404	70.00	55.00	54.67	1,771	82.50	88.00	99.00
Montreal	3,105	82.50	67.50	65.61	1,685	82.50	88.00	99.00
New York City	3,249	82.50	67.50	65.61	1,278	73.00	80.00	90.00
Omaha, Nebr	2,007	65.00	52.50	54.57	1,598	82.50	88.00	99.00
Pittsburgh	2,772	80.00	65.00	63.43	1,410	75.00	80.00	90.00
Philadelphia	3,159	82.50	67.50	65.61	1,188	67.50	80.00	90.00
St. Louis	2,090	70.00	55.00	54.67	1,185	73.00	80.00	90.00
St. Paul	2,394	70.00	55.00	54.67	1,761	82.50	88.00	99.00
Toronto, Canada	2,772	80.00	65.00	63.43	....	82.50	88.00	99.00
Washington, D. C	2,982	82.50	67.50	65.61	1,053	67.50	80.00	90.00

[1] Exhibit, Chase No. 5, I. C. C. Docket 1168.

EXHIBIT 13.—*Present and proposed rates for refrigerating perishable products from the Imperial Valley, Calif., and from a representative point in Florida to the same markets given in the preceding exhibit.*

To—	From all points on Southern Pacific R. R. east of Banning, including points Niland to Calexico and all points on Atchison, Topeka & Santa Fe R. R. south and east of Cadiz to Parker.							From all points in Florida east of the Apalachicola River.						
	Miles.[1]	Deciduous fruits (except apples), berries, and tropical fruits.		Vegetables, also perishable freight not otherwise indexed.		Melons.		Miles.[2]	Melons.		Vegetables and citrus fruits.		Other fruits.	
		Present rate.	Proposed rate.	Present rate.[3]	Proposed rate.	Present rate.	Proposed rate.		Present rate.	Proposed rate.	Present rate.[4]	Proposed rate.	Present rate.	Proposed rate.
Albany, N. Y.	2,936	$102.50	$135.00	$82.50	$120.00	$110.00	$140.00	1,351	$70.00	$95.00	$70.00	$85.00	$80.25	$90.00
Buffalo, N. Y.	2,640	102.50	130.00	82.50	115.00	110.00	135.00	1,417	72.00	95.00	72.00	85.00	80.25	90.00
Boston, Mass.	3,136	105.00	140.00	85.00	125.00	112.50	145.00	1,417	72.00	95.00	72.00	85.00	80.25	90.00
Baltimore, Md.	2,960	102.50	135.00	82.50	120.00	110.00	140.00	1,022	66.00	87.50	66.00	77.50	72.23	82.50
Cincinnati, Ohio.	2,289	100.00	130.00	80.00	115.00	107.50	135.00	1,074	66.00	87.50	66.00	77.50	66.88	82.50
Chicago, Ill.	2,100	90.00	120.00	70.00	105.00	97.50	125.00	1,341	72.00	95.00	72.00	85.00	72.23	90.00
Cleveland, Ohio.	2,457	100.00	130.00	80.00	115.00	107.50	135.00	1,339	72.00	95.00	72.00	85.00	72.23	90.00
Evansville, Ind.	2,114	95.00	125.00	75.00	110.00	102.50	130.00	1,030	66.00	87.50	66.00	77.50	66.88	82.50
Kansas City, Mo.	1,599	85.00	115.00	65.00	100.00	92.50	120.00	1,435	78.00	100.00	78.00	90.00	80.25	95.00
Louisville, Ky.	2,269	100.00	125.00	80.00	110.00	107.50	130.00	1,056	66.00	87.50	66.00	77.50	66.88	82.50
Milwaukee, Wis.	2,185	90.00	120.00	70.00	105.00	97.50	125.00	1,465	76.00	100.00	76.00	90.00	78.58	95.00
Minneapolis, Minn.	2,100	90.00	120.00	70.00	105.00	97.50	125.00	1,804	78.00	105.00	78.00	95.00	85.60	100.00
Montreal, Quebec.	2,940	107.50	140.00	87.50	125.00	115.00	145.00	1,643	76.00	100.00	76.00	90.00	80.25	95.00
New York City.	3,090	102.50	135.00	82.50	120.00	110.00	140.00	1,193	66.00	87.50	66.00	77.50	72.23	82.50
Omaha, Nebr.	1,800	85.00	115.00	65.00	100.00	92.50	120.00	1,687	78.00	100.00	78.00	90.00	85.60	95.00
Pittsburgh, Pa.	2,570	102.50	130.00	82.50	115.00	110.00	135.00	1,351	72.00	95.00	72.00	85.00	72.23	90.00
Philadelphia, Pa.	3,055	102.50	135.00	82.50	120.00	110.00	140.00	1,117	66.00	87.50	66.00	77.50	72.23	82.50
St. Louis, Mo.	1,949	90.00	120.00	70.00	105.00	97.50	125.00	1,225	72.00	92.50	72.00	82.50	72.23	87.50
St. Paul, Minn.	2,100	90.00	120.00	70.00	105.00	97.50	125.00	1,793	78.00	105.00	78.00	95.00	85.60	100.00
Toronto, Canada.	2,606	105.00	130.00	85.00	115.00	112.50	135.00	1,530	76.00	100.00	76.00	90.00	80.25	95.00
Washington, D. C.	2,920	102.50	135.00	82.50	120.00	110.00	140.00	982	66.00	87.50	66.00	77.50	72.23	82.50

[1] Distance from the Imperial Valley, Calif.
[2] Distance from a representative Florida point.
[3] Rate on vegetables. The rate on citrus fruits is $5 higher in each instance.
[4] Rate on vegetables. The rate on citrus fruits in no instance is more than $3 below the rate on vegetables.